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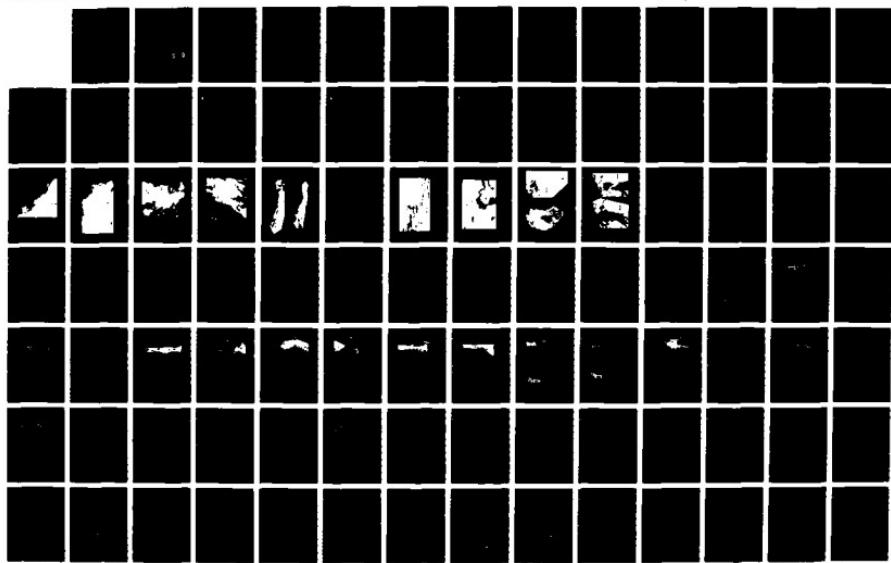
COASTAL OCEANOGRAPHY IN THE BEAUFORT SEA SUMMER 1985  
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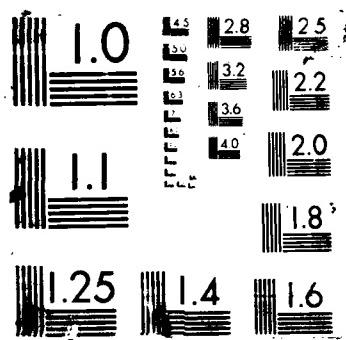
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## Coastal Oceanography in the Beaufort Sea, Summer 1985

A Joint Report by

P. Becker and G. R. Garrison  
The Applied Physics Laboratory  
University of Washington

and

R. K. Perry  
The Arctic Submarine Laboratory  
Naval Ocean Systems Center

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APL-UW-8705  
July 1987

Applied Physics Laboratory  
University of Washington  
Seattle, Washington 98105

Arctic Submarine Laboratory  
Naval Ocean Systems Center  
San Diego, California 92152

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July 1987**

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University of Washington  
Seattle, Washington 98105**

**Arctic Submarine Laboratory  
Naval Ocean Systems Center  
San Diego, California 92152**

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The scientific party from the Arctic Submarine Laboratory provided the primary CTD measurements during the cruise. The authors are grateful to Randall Judd for operating the Neil Brown CTD system and the processing computer. Cooperation of the officers and crew of USCG ice-breaker Polar Sea is greatly appreciated. The satellite images provided by Kristina Ahlnäs of the Geophysical Institute, University of Alaska, were very helpful.

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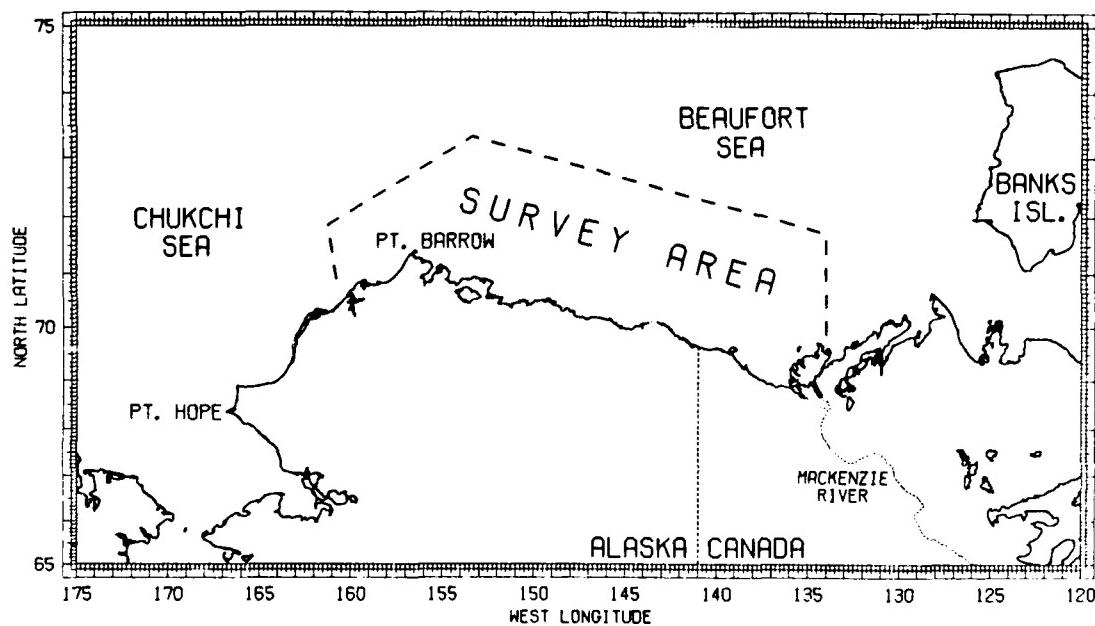
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## ABSTRACT

An oceanographic cruise along the north coast of Alaska and Canada in August and September 1985 reveals evidence of how the Alaskan Coastal Current from the southwest and the Mackenzie River outflow in the eastern portion influence oceanographic conditions in the Beaufort Sea. The coastal current crowds the shore and at depth displaces some of the cold, saline bottom water that drains from the Chukchi Sea through the Barrow Canyon in the spring. The eastward extent of the coastal current is about  $148^{\circ}\text{W}$  longitude, and the westward progression of the Mackenzie River water about  $141^{\circ}\text{W}$  longitude. The ice and weather conditions during the survey appeared to influence water exchange.

## I. INTRODUCTION

An icebreaker cruise along the north coast of Alaska in August and September 1985 provided the opportunity to study the influence of the Alaskan Coastal Current, which carries Bering Sea water northward into the Chukchi and Beaufort seas, and of the Mackenzie River, which pours fresh water into the eastern portion of the Beaufort Sea. The area covered by the survey is shown in Figure 1.

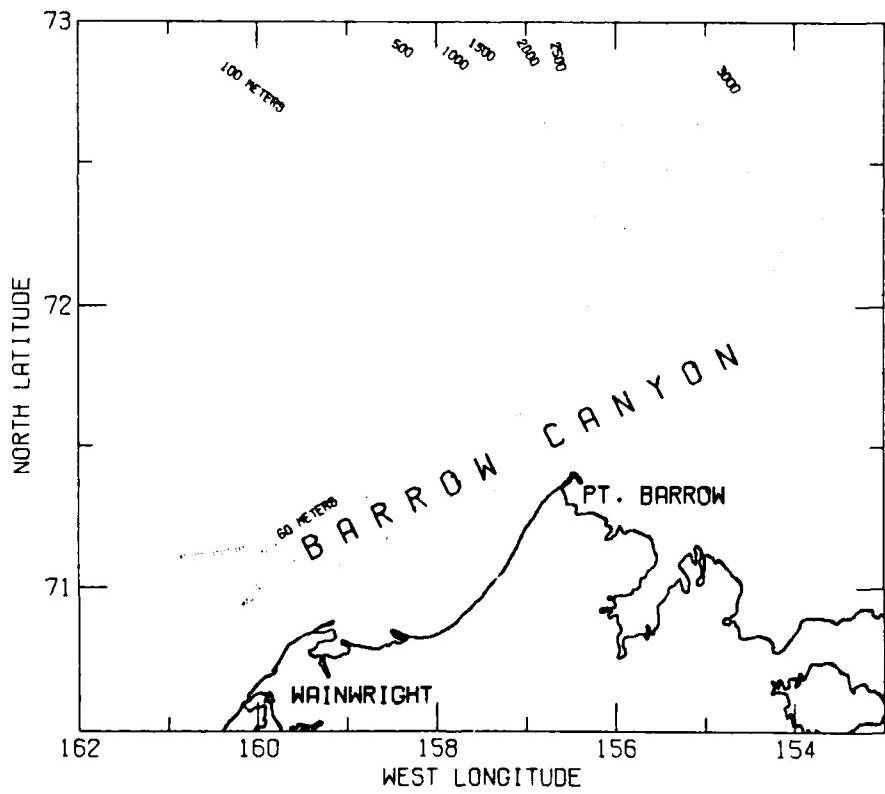


*Figure 1. Location of the survey off the north coast.*

Oceanographic measurements have been made off the north coast of Alaska by the Applied Physics Laboratory since 1971.<sup>1-3</sup> The coastal current has been studied extensively.<sup>4-7</sup> This northward flow of water is apparently caused by differences<sup>8</sup> in the levels of the Arctic Ocean and the Bering Sea and is modified by regional atmospheric pressure differences (which sometimes even reverse the direction). As the current moves northward, it draws in the waters of Norton and Kotzebue sounds which have been warmed by the sun. A large part of the resulting mass of warm water moves along the coast from Pt. Hope to Pt. Barrow and enters the Beaufort Sea, where it dissipates into large eddies. Measurements in the Beaufort Sea in the fall of 1980,<sup>9</sup> 1982,<sup>10</sup> and 1984<sup>11</sup> showed thin layers of this warm intrusion as far as 150 miles from the coast. One purpose of the study reported here was to learn what happens to this warm water (up to 10°C). Where does it go? How rapidly does it mix?

Ice cover in the Beaufort Sea often shows a seasonal deterioration which may be due to the warm surface layer caused by runoff from the Mackenzie River. The trajectory and mixing of this plume of warm, fresh water have not been fully documented. Measurements in 1974 and 1975 by Herlinveaux and de Lange Boom<sup>12</sup> showed oceanographic conditions closer to shore and farther east than the present study. Measurements by Huggett et al.<sup>13</sup> from 1973–1975 gave information on currents near the Mackenzie River outflow and to the east. A second purpose of the 1985 study was to determine the oceanographic influence of the Mackenzie River in the southern Beaufort Sea. Does it become a thin surface layer, or does it mix downward and lose identity?

The cruise started at 134°W longitude, just east of Mackenzie Bay, and progressed westward to Pt. Barrow. The Barrow Canyon area, shown in Figure 2, was then traversed twice, at a 10 day interval, to study not only the warm intrusion but also the distribution of the cold Chukchi water that flows down the Barrow Canyon in the spring and early summer.



*Figure 2. Location of the Barrow Canyon.*

## II. THE CRUISE

The measurements reported here were taken between 17 August and 15 September from USCG icebreaker *Polar Sea* as it cruised along the north coast of Canada and Alaska. The scientific party consisted of cartographer and chief scientist Robert Perry, physicist Edward Floyd, physicist Burton Markham, and oceanographer Randall Judd from the Arctic Submarine Laboratory (ASL) of the Naval Ocean Systems Center (NOSC) and oceanographer Peter Becker from the Applied Physics Laboratory (APL) of the University of Washington. The oceanographic stations consisted mainly of conductivity-temperature-depth (CTD) profiles.

Prior to the cruise, Becker met with Kristina Ahlnäs at the Geophysical Institute of the University of Alaska, Fairbanks, to collect recent satellite images of the area to be traversed and to discuss criteria for satellite coverage during the cruise. Of the potential NOAA satellite coverage available, amounting to some 30 satellite passes, an order was placed for 40% of the imagery during 15–31 August and 60% during 1–15 September, with no coverage east of 148°W after 1 September. LANDSAT coverage was also requested.

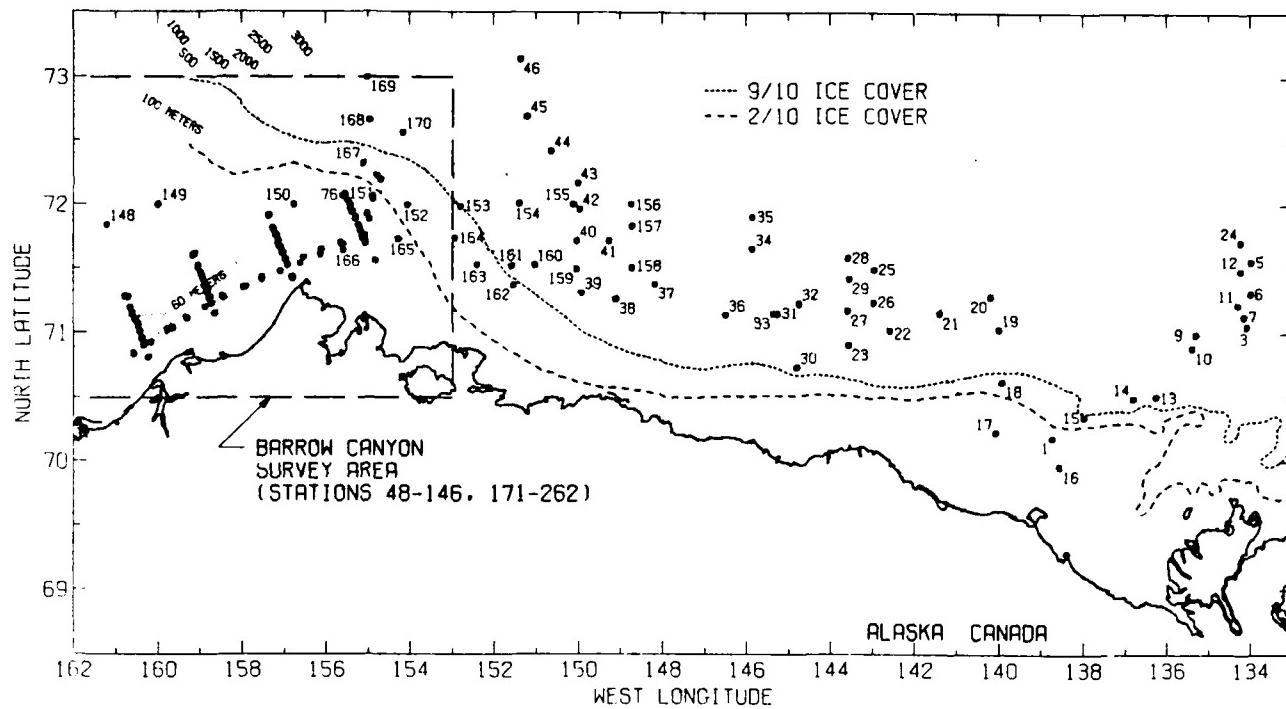
The scientific party met at Prudhoe Bay on 14 August, where men and equipment were transferred to the *Polar Sea* by the ship's helicopters.

Hydrographic stations commenced on 17 August enroute to the easternmost station at 134°W longitude. (See Figure 3 for location of stations.) Heavy ice was encountered shortly after leaving Prudhoe Bay. The pack consisted of up to 70% old floes and multiyear ice and extended to within 16–32 km of the coast. Because of the ice, the ship's forward rate of advance was often limited to less than 1 knot the first 6 days of the survey.

Helicopter deployment of ARGOS weather buoys for the Polar Science Center (PSC) of the Applied Physics Laboratory commenced on 23 August and continued at intervals throughout the trip as desired locations were reached or came within helicopter range. Helicopter-supported CTD stations using the APL lightweight CTD profiler were occupied out to 100 km from the ship on parallel tracks to increase coverage and supplement those taken from the slowly moving ship in the heavy ice. Because of the extensive ice cover, attempts to penetrate the ice pack north of 72° were abandoned, and the ship proceeded westward on 24 August.

Hydrographic sections were more successful in the lighter ice west of longitude 145°. Deployment of ARGOS buoys and helicopter CTD stations continued as weather permitted.

One task of the cruise was the location and recovery of a damaged meteorological research buoy from the drifting remains of the ice camp used for the spring 1985 Arctic



*Figure 3. Location of all stations during the Polar Sea cruise in August–September 1985.*

Internal Wave Experiment (AIWEX) located near  $73^{\circ}\text{N}$   $151^{\circ}\text{W}$ . The site was reached at 1600 GMT on 29 August, but fog prevented recovery until 1400 on 30 August. While we were in the area, a 20-min time series of temperature and conductivity was taken at six selected depths to help calibrate a nearby SALARGOS oceanographic buoy.

The Barrow Canyon area was reached on 2 September 1985, and hydrographic sections commenced at 0523. Fifty-one stations were established on five lines, with four lines perpendicular to the coast and one paralleling it. These lines were at the same locations as sections obtained during previous APL studies over the past 15 years, but the stations were more closely spaced. Upon completion of the first Barrow Canyon series, the ship departed for Hanna Shoal near  $71^{\circ}\text{N}$ ,  $161^{\circ}\text{W}$  to deploy the last ARGOS buoy.

The next exercise was a series of hydrographic sections perpendicular to the coast east of Pt. Barrow near  $149^{\circ}\text{W}$  to fill in between the earlier lines and to record changes due to the movement of water through the Barrow Canyon during the prior week. Helicopter stations were taken when possible; however, fog interfered.

The Barrow Canyon stations were repeated starting on 12 September at 1232 and finishing on 15 September at 0049. Four of the previous 51 stations were eliminated because of a shortage of time.

Because of deteriorating weather conditions (40-knot winds, snow, and rain), departure of the scientific party from the ship was delayed until 17 September. The scientific party departed from Barrow on the night of 17 September and from Anchorage on 18 September. The scientific equipment was returned to Seattle on the *Polar Sea*, which arrived on 1 October.

Altogether, 150 vertical profiles were made with the Neil Brown CTD unit and 111 with the APL CTD unit. Four APL/PSC ARGOS meteorological buoys were deployed to fill out an existing grid, and the 1985 AIWEX-ARGOS buoy was recovered for analysis of its failure.

### III. WEATHER AND POSITION DATA

Weather and position data were provided by the *Polar Sea*. Table I is a copy of the ship's weather records. The position data were obtained from her navigation system, which was updated with NAVSAT fixes every few hours. During the 30 min to 1 h that the ship stopped for each hydrographic station, an average position was obtained and assigned to that station. When both CTD instruments were used, a separate station number was given to each drop even though they were at the same position. The times and positions of all stations are given in Table II.

Table I. Weather records from the Polar Sea.

NAME OF SHIP <b>USCGC Polar Sea</b>			CALL SIGN <b>NRUO</b>		COUNTRY OF REGISTRY <b>USA</b>		MASTER <b>J. T. Howell Capt. USCG</b>		NOAA FORM 72-1A 11-82																														
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<b>MST1 ALLES MST1 ROSE MST2 MICHELS MST3 GALIK/ROSS</b>																																							
Day of Month	Time of Closest Approach to Land (L or R) Year est. now	POSITION OF SHIP		Precipitation Data Indication (P) Weather Data Indication (W) Height of Lowest Cloud	VSI D-1*	Apparent Wind	TRUE WIND		TEMPERATURES			PRESSURE		WEATHER		CLOUDS																							
		Latitude Degrees and Minutes	Longitude Degrees and Minutes				Ship's Course at time of obs.	Ship Speed Knots	Direction Relative to Ship from	Speed Knots	Total Cloud Amount (0-9)	Group Indicator	Sign of Temp (+ = 0 - = 1)	Dry Bulb Degrees and Tenths C	Wet Bulb Degrees and Tenths C	Group Indicator	Sign of DP (+ = 0 - = 1)	Sea Level Pressure Millibars and Tenths Thousands Fig. omitted	1 Hr. Bar Pressure Change Millibars and Tenths	Group Indicator	Pres ent Type of Cloud Primary Secondary Amount of Cumulus Type of Low Cloud Type of Middle Cloud Type of High Cloud																		
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Supersedes all editions.

Table I, cont.

SHIP'S WEATHER OBSERVATIONS (PRINT ALL ENTRIES)												GENERAL INSTRUCTIONS																		
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE												TIME ZONE IS +8 UNIFORM																		
SHIP'S LATITUDE AND SPEED		SEA SURFACE TEMPERATURE		WAVES								ICE ACCRETION				ICE				REMARKS				TRANSMISSION DETAILS		OBSERVER'S INITIALS (PRINT)				
				SEA WAVES				SWELL				Indicator		Thickness of ice acc.		Indicator		Concentration of ice		Stage of development		Ice of land origin		Bearing of ice edge		Situation and trend				
				Period	Height	Direction from		Predominant Swell	Secondary Swell	Indicator	Period	Height	Indicator	Group indicator	Cause of ice Acc.	Rate of ice Acc.	cm	Indicator	Period	Height	Indicator	Period	Height							
				Sec	Half Meters	Sec	Half Meters	Sec	Half Meters	Sec	Half Meters	Sec	Sec	Sec	cm		Sec	Half Meters	Sec	Half Meters	Sec	Half Meters								
222	D <sub>8</sub> V <sub>8</sub>	0	+	T <sub>8</sub> T <sub>8</sub> T <sub>8</sub> T <sub>8</sub>	2P <sub>8</sub> P <sub>8</sub> H <sub>8</sub> H <sub>8</sub>	3	+	2	4	4	5	5	6	6	ICE	c. S. b. D. z.														
222	φφ	0	φ	φφφφ	4	2		3	4	5	5	6		ICE	58φ92												φφφφ			
222	3	1	0	φφφφ	8	2		3	4	5	5	6		ICE	58φ92												a-mr			
222	6	1	0	φφφφ	9	2		3	4	5	5	6		ICE	58φ92												a-mr			
222	φφ	0	φ	φφφφ	2	2		3	4	5	5	6		ICE	58φ92												B&G			
222	φφ	0	φ	φφφφ	7	2		3	4	5	5	6		ICE	58φ92												fwm			
222	3	2	0	φφφφ	2	2		3	4	5	5	6		ICE	28φ8φ												a-mr			
222	3	2	0	φφφφ	3	9	2	0	φφφφ	3	4	5	6		ICE	25φφφ												P&R		
222	1	+	0	φφφφ	2	2		3	4	5	5	6		ICE	58φ92												B&G			
222	φφ	0	φ	φφφφ	4	2		3	4	5	5	6		ICE	58φ95												P&R			
222	8	1	0	Lφφφ	2	2		3	4	5	5	6		ICE	58φ95												P&R			
222	φφ	0	Lφφφ	2	2		3	4	5	5	6		ICE	58φ95												B&G				
222	5	1	0	Lφφφ	2	2		3	4	5	5	6		ICE	57φ94												P&R			
222	φφ	0	Lφφφ	3	2		3	4	5	5	6		ICE	58φ95												P&R				
222	5	1	0	Lφφφ	8	2		3	4	5	5	6		ICE	58φ94												B&G			
222	2	1	0	Lφφφ	5	2		3	4	5	5	6		ICE	58φ94												P&R			
222	5	2	0	φφφφ	4	2		3	4	5	5	6		ICE	45φ/3												B&G			
222	8	1	0	φφφφ	8	2		3	4	5	5	6		ICE	65φ/2												P&R			
222	φφ	0	Lφφφ	4	2		3	4	5	5	6		ICE	54φ92												B&G				
222	6	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/3												P&R			
222	6	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	2	2		3	4	5	5	6		ICE	57φ92												P&R			
222	8	1	0	Lφφφ	4	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	6	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	58φ92												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												B&G			
222	5	1	0	Lφφφ	1	2		3	4	5	5	6		ICE	56φ/2												P&R			
222	5	1	0	Lφφφ	1	2																								

Table I, cont.

NAME OF SHIP <b>USCGC Polar Sea</b>		CALL SIGN <b>NRUO</b>	COUNTRY OF REGISTRY <b>U.S.A.</b>	MASTER <b>J. T. HOWELL, Capt USCG</b>	NOAA FORM 72-1A (1-62)														
MONTH AND YEAR <b>AUG 1 SEPT</b>		VOYAGE FROM <b>NOSC</b> TO <b>EN. UCHYTIL</b>	RADIO OFFICER																
BAR COR <b>0.0 mb</b>		LAST NOV VISIT YR <b>85</b> MO <b>06</b> DA	PRINCIPAL OBSERVER	OBSERVER	OBSERVER														
		<b>MSTC ALLES MSTL ROSE MST2 MICHELS MST3 GALIK/ROSS</b>																	
Day of Month	Time of Observation 1 or 4 Year est. hour	POSITION OF SHIP		APPARENT WIND		TRUE WIND		TEMPERATURES			PRESSURE		WEATHER		CLOUDS				
		Latitude Degrees and Minutes	Longitude Degrees and Minutes	Pre-dominant Data Indicator Weather Data Indicator 1 or 2 Height of Lowest Cloud	Ship's Speed True Knots 000°- 360° Knots	Direction Relative to Ship from	Total Cloud Amount (0-9)	Direction from	Speed Knots	Group Indicator Sign of Refr. + 0 - 1 Degrees and Tenths	Dry Bulb °C	Wet Bulb °C	Group Indicator Sign of DP + 0 - 1 Whole Degrees	Sea Level Pressure Milbars Thousands Fig. Omited	1 HOUR PRESSURE CHANGE Group Indicator Characteristic (H)	Amount M. bars and tenths	Cloud Indicator Sign of Wind Primary Secondary	Present Type of Cloud Amount of Cloud Type of Motion Type of High Cloud	
0 15 GMT	30 23 GMT	Position Indicators Quadrant of Circle Degrees and Tenths	Position Indicators Quadrant of Circle Degrees and Tenths	Vis- ibility 30-99	Ship's Course at time of obs.	Group Indicator Sign of Refr. + 0 - 1 Total Cloud Amount (0-9)	Group Indicator Sign of Refr. + 0 - 1 Total Cloud Amount (0-9)	Group Indicator Sign of Refr. + 0 - 1 Degrees and Tenths	Group Indicator Sign of DP + 0 - 1 Whole Degrees	Group Indicator Sign of DP + 0 - 1 Whole Degrees	Group Indicator Sign of DP + 0 - 1 Whole Degrees	Group Indicator Sign of DP + 0 - 1 Whole Degrees	Group Indicator Sign of DP + 0 - 1 Whole Degrees	Group Indicator Sign of DP + 0 - 1 Whole Degrees	Group Indicator Sign of DP + 0 - 1 Whole Degrees	Group Indicator Sign of DP + 0 - 1 Whole Degrees			
				ESTIMATED ANEMOMETER AN HGT <b>33</b>															
YY GG	99 7 0 6	7 1 4 8 3 4 1 / 9 2	185 0 0 265 1 1	9 0 9 1 1	1 0 0 0 4 0 4 . 4	2 0 0 1	4 0 2 3 8	5 2 0 0 3 7 4 7 4 4 8											
2 7 0 0 4	99 7 0 6	7 1 4 8 3 4 1 / 9 2	185 0 0 265 1 1	9 0 9 1 1	1 0 0 0 4 0 4 . 4	2 0 0 1	4 0 2 3 8	5 2 0 0 3 7 4 7 4 4 8											
2 7 1 2 4	99 7 0 5	7 1 4 8 2 4 1 4 9 7	210 0 0 250 0 5	2 0 0 5	1 0 0 0 4 0 4 . 6	2 1 0 2	4 0 2 4 9	5 0 0 0 4 7 4 0 4 4 8											
2 8 0 0 4	99 7 1 1	7 1 4 8 3 4 2 4 9 7	0 9 4 0 0 0 2 3	1 3	6 0 1 2 1 3	1 0 0 3 5 0 2 5	2 0 0 1	4 0 2 0 0 5 8 0 2 1 7											
2 8 1 2 4	99 7 1 4	7 1 4 9 9 4 2 5 9 7	330 0 5 260 0 8	8 2 0 1 4	1 0 0 3 0 0 2 2	2 0 0 1	4 0 1 2 0 5 7 0 1 9 7												
2 9 0 0 4	99 7 1 8	7 1 5 0 1 4 2 4 9 7	0 3 4 0 4 0 9 0 0 5	8 1 7 0 7	1 0 0 3 5 0 2 5	2 0 0 1	4 0 0 3 9 5 7 0 1 7												
2 9 1 2 4	99 7 2 4	7 1 5 0 6 4 1 5 9 7	220 0 0 300 1 5	7 1 6 1 5	1 0 0 3 5 0 3 0	2 0 0 2	4 0 0 1 2 5 6 0 0 8 7 6 0 6 2 8 7 6 0 0												
3 0 0 0 4	99 7 3 1	7 1 5 1 3 4 1 7 9 1	0 1 9 0 7 1 2 0 0 6	5 1 7 1 1	1 0 0 2 5 0 2 5	2 0 0 3	4 0 0 1 3 5 2 0 0 5 7 4 4 4 2												
3 0 1 2 4	99 7 3 1	7 1 5 1 3 4 2 4 9 7	1 4 0 0 0 0 2 0 1 3	8 1 6 1 3	1 0 0 2 0 0 1 5	2 0 0 1	4 0 0 4 2 5 2 0 0 7 7												
3 1 0 0 4	99 7 3 1	7 1 5 1 3 4 1 3 9 2	1 4 1 0 0 0 0 6 5 0 6	8 2 1 0 6	1 0 0 1 6 0 1 6	2 0 0 2	4 0 0 8 5 5 2 0 1 5 7 4 4 4 4 8												
3 1 1 2 4	99 7 3 1	7 1 5 1 3 4 1 / 9 2	1 2 6 0 0 0 7 5 0 6	9 2 0 0 6	1 0 0 0 7 0 0 5	2 0 0 1	4 0 1 1 7 5 1 0 0 8 7 5 1 5 4 8												
0 1 0 0 4	99 7 3 1	7 1 5 1 2 4 1 1 9 6	220 0 3 0 2 5 0 8	8 2 4 0 5	1 0 0 1 0 0 0 6	2 0 0 1	4 0 1 3 4 5 2 0 0 4 7 5 0 5 4 8												
0 1 1 2 4	99 7 2 0	7 1 5 4 3 4 1 / 9 1	230 1 0 2 7 0 0 8	9 0 9 1 3	1 0 0 2 8 0 2 4	2 0 0 2	4 0 0 9 8 5 7 0 2 5 7 4 5 4 4 8												
0 2 0 0 4	99 7 1 3	7 1 5 7 5 4 1 3 9 7	245 1 5 2 9 0 1 0	8 1 0 1 5	1 0 0 4 3 0 4 3	2 0 0 5	4 0 0 3 0 5 7 0 0 7 6 0 6 4 8												
0 2 1 2 4	99 7 1 3	7 1 5 8 4 4 1 / 9 2	1 6 2 0 0 2 3 0 0 2	9 0 3 0 2	1 0 0 5 4 0 5 2	2 0 0 5	4 0 0 4 6 5 1 0 0 8 7 5 1 5 4 8												
0 3 0 0 4	99 7 1 9	7 1 5 5 0 4 1 2 9 7	1 7 0 0 0 3 0 0 2 0	8 1 1 2 0	1 0 0 2 2 0 2 0	2 0 0 2	4 0 1 1 0 5 2 0 1 6 7 2 8 6 4 8												
0 3 1 2 4	99 7 1 8	7 1 5 5 2 4 1 3 9 7	1 8 8 0 0 2 6 0 0 6	8 0 9 0 6	1 0 0 2 2 0 1 8	2 0 0 2	4 0 1 5 3 5 2 0 0 6 7 1 0 2 2 8 8 6												
0 4 0 0 4	99 7 1 4	7 1 5 6 8 4 1 3 9 7	3 6 0 2 6 0 2 0 1 4	8 0 2 1 2	1 0 0 3 6 0 3 1	2 0 0 2	4 0 1 1 7 5 3 0 0 7 7 0 2 4 2 8 8 6												
0 4 1 2 4	99 7 1 5	7 1 5 9 4 4 2 3 9 7	1 5 5 0 0 2 4 0 0 8	8 0 4 0 8	1 0 0 0 4 1 0 2	2 1 0 1	4 0 2 2 0 5 1 0 0 7 7												
0 5 0 0 4	99 7 1 7	7 1 6 0 6 4 1 9 2	3 3 0 2 2 5 0 3 0 2 0	8 0 4 1 1 1	1 0 0 0 8 0 0 5	2 0 0 0	4 0 2 7 8 5 2 0 1 8 7 4 2 4 4 8												
0 5 1 2 4	99 7 1 7	7 1 6 1 3 4 1 9 3	3 2 5 0 3 3 3 5 0 2 0	8 0 2 0 2	1 1 0 3 5 1 3 4	2 1 0 4	4 0 3 1 5 5 2 0 0 5 7 4 4 4 4 8												
0 6 0 0 4	99 7 2 0	7 1 5 9 4 4 1 3 9 7	2 0 0 0 3 0 5 0 4	8 1 7 0 4	1 1 0 0 5 1 0 5	2 1 0 2	4 0 3 1 0 5 8 0 0 5 7 0 2 4 2 8 8 6												
0 6 1 2 4	99 7 2 0	7 1 5 2 8 4 1 3 9 6	1 9 7 0 0 2 5 0 0 8	8 0 9 0 8	1 1 0 1 5 1 2 6	2 1 0 5	4 0 2 7 5 5 8 0 1 1 7 7 0 7 2 8 8 5												
0 7 0 0 4	99 7 2 0	7 1 5 0 1 4 1 2 9 7	1 5 3 0 0 2 8 0 0 6	7 0 5 0 6	1 1 0 4 4 1 0 4 5	2 1 0 5	4 0 2 1 6 5 7 0 1 3 7 4 0 7 4 8												
0 7 1 2 4	99 7 2 0	7 1 4 8 7 4 1 1 9 6	0 8 7 0 0 2 5 5 0 3	3 3 4 0 3	1 1 0 6 1 1 6 1	2 1 0 7	4 0 1 6 9 5 6 0 5 6 7 4 0 4 4 8												
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40	NOAA FORM 72-1A 1-62	Supersedes all editions																	

Table I, cont.

Table I, cont.

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SHIP'S WEATHER OBSERVATIONS (PRINT ALL ENTRIES)												GENERAL INSTRUCTIONS													
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE												<ol style="list-style-type: none"> <li>Print all entries using a black ballpoint pen.</li> <li>Complete appropriate blocks on the upper left side.</li> <li>Entries in shaded columns are not to be transmitted by radio.</li> <li>Start new sheet at the beginning of each month.</li> <li>Complete all columns; substitute "/" for elements within a group that are not observed. Groups preceded by a number may be omitted if none of the elements in the group are observed.</li> <li>See NWS Observing Handbook No. 1 for complete observing and coding instructions.</li> </ol>													
SHIP'S LOCATION LAT. ALT.		SEA SURFACE TEMPERATURE		WAVES						ICE ACCRETION		ICE				REMARKS				TRANSMISSION DETAILS					
				SEA WAVES			SWELL																		
				PERIOD	HEIGHT	DIRECTION FROM	PREDOMINANT SWELL	SECONDARY SWELL			PERIOD	HEIGHT	PERIOD	HEIGHT	GROUP INDICATOR	CAUSE OF ICE ACC	THICKNESS OF ICE ACC	RATE OF ICE ACC	INDICATOR FOR ICE GROUP	CONCENTRATION OF ICE	SIZE OF DEVELOPMENT	ICE ORIGIN	BREAKING OF ICE EDGE	SURFACES AND TEND	INITIALS (PRINT)
				Sec	Half Meters	Sec	Sec	Sec	Sec	Sec	Half Meters	Sec	Half Meters	Sec	Sec	Cm									
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PJR	
222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Amr	
222	0	0																							

Table II. Times and positions of the CTD stations taken during the 1985 cruise.

Station Number	ASL Cast	APL Cast	Julian Day <sup>a</sup>	GMT hhmm	Platform	Latitude	Longitude
1		X	229	2247	Ship	70 11.1	138 44.1
2	X		229	2312	Ship	70 11.1	138 44.1
3	X		230	1849	Ship	71 3.6	134 6.7
4	X		230	1918	Ship	71 3.6	134 6.7
5	X		231	1554	Ship	71 33.9	133 59.5
6	X		232	0945	Ship	71 18.9	134 0.0
7	X		233	0147	Ship	71 8.2	134 9.7
8	X		233	0214	Ship	71 8.2	134 9.7
9	X		233	1223	Ship	70 59.8	135 19.2
10	X		233	2145	Ship	70 53.8	135 24.1
11		X	233	2230	Helo	71 13.5	134 19.0
12		X	233	2300	Helo	71 29.5	134 15.0
13	X		234	0444	Ship	70 31.1	136 16.1
14	X		234	0820	Ship	70 30.1	136 48.7
15	X		234	1150	Ship	70 21.2	137 59.3
16	X		234	1437	Ship	69 57.6	138 34.6
17	X		234	1810	Ship	70 13.9	140 4.6
18	X		234	2101	Ship	70 37.7	139 56.0
19	X		235	0240	Ship	71 1.9	140 0.8
20	X		235	1723	Ship	71 17.0	140 12.0
21	X		236	0437	Ship	71 9.0	141 24.6
22	X		236	1242	Ship	71 1.2	142 36.4
23	X		236	2321	Ship	70 54.8	143 35.1
24		X	236	1700	Helo	71 42.9	134 15.0
25		X	236	1800	Helo	71 29.5	142 58.0
26		X	236	1845	Helo	71 14.0	142 59.0
27		X	236	2257	Helo	71 10.2	143 36.0
28		X	236	2342	Helo	71 35.0	143 35.3
29		X	237	0015	Helo	71 25.0	143 34.0
30		X	237	0613	Ship	70 44.4	144 48.8
31		X	237	1043	Ship	71 8.7	145 15.9
32		X	237	1804	Helo	71 13.3	144 45.0
33	X		237	1829	Ship	71 8.8	145 22.1
34		X	237	2221	Helo	71 39.2	145 52.3
35		X	237	2253	Helo	71 54.2	145 52.0
36	X		238	0425	Ship	71 8.1	146 29.8
37		X	240	0014	Helo	71 22.4	148 11.0
38	X		240	0509	Ship	71 15.5	149 6.7
39	X		240	1001	Ship	71 18.6	149 56.1
40	X		240	1803	Ship	71 42.9	150 2.4
41		X	240	1816	Helo	71 42.9	149 16.5
42	X		241	0144	Ship	71 57.9	149 58.5
43	X		241	0548	Ship	72 9.8	150 1.7
44	X		241	1101	Ship	72 24.9	150 39.9
45	X		241	1636	Ship	72 41.5	151 13.9
46	X		242	0200	Ship	73 8.6	151 23.0
47		X	245	0524	Ship	70 50.7	160 34.9
48	X		245	0626	Ship	70 55.8	160 10.8
49	X		245	0819	Ship	71 2.2	159 39.1
50		X					
51		X					
52	X						

<sup>a</sup> Julian Day 244 was 1 September

Table II, cont.

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
53		X	245	0922	Ship	71 7.0	159 19.4
54	X	X	245	1033	Ship	71 11.8	158 52.6
55	X	X	245	1135	Ship	71 16.9	158 28.2
56	X	X	245	1300	Ship	71 21.4	157 55.2
57	X	X	245	1409	Ship	71 24.9	157 31.9
58	X	X	245	1530	Ship	71 28.7	157 5.3
59	X	X	245	1659	Ship	71 32.5	156 36.9
60	X	X	245	1831	Ship	71 36.7	156 8.3
61	X	X	245	2000	Ship	71 41.3	155 35.9
62	X	X	245	2121	Ship	71 44.4	155 8.5
63	X	X	245	2351	Ship	71 55.6	155 1.3
64	X	X	246	0109	Ship	72 3.9	154 53.9
65	X	X	246	0254	Ship	72 13.5	154 48.1
66	X	X	246	0531	Ship	72 4.1	155 36.6
67	X	X	246	0650	Ship	72 1.9	155 29.6
68	X	X	246	0813	Ship	71 58.1	155 26.6
69	X	X	246	0920	Ship	71 56.7	155 23.4
70	X	X	246	1044	Ship	71 53.5	155 18.8
71	X	X	246	1150	Ship	71 50.3	155 14.7
72	X	X	246	1251	Ship	71 47.6	155 11.1
73	X	X	246	1400	Ship	71 45.4	155 4.9
74	X	X	246	1502	Ship	71 41.8	155 3.8
75	X	X	246	1640	Ship	71 33.7	154 49.3
92a	X	X	247	0048	Ship	71 25.3	156 47.0
93	X	X	247	0202	Ship	71 31.8	156 55.2
94	X	X	247	0258	Ship	71 34.4	156 58.4
95	X	X	247	0344	Ship	71 37.7	157 3.3
96	X	X	247	0430	Ship	71 40.2	157 6.4
97	X	X	247	0512	Ship	71 43.1	157 8.0
99							
100	X	X					
101	X	X					
102	X	X					
103	X	X					
104	X	X					
105	X	X					

Table II, cont.

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
106	X		247	0554	Ship	71 45.9	157 12.4
107	X	X	247	0636	Ship	71 48.9	157 16.4
108	X	X	247	0727	Ship	71 54.7	157 22.6
109							
110	X	X	247	1034	Ship	71 36.2	159 9.9
111	X	X	247	1135	Ship	71 30.5	159 3.1
112	X	X	247	1221	Ship	71 27.1	158 57.9
113	X	X	247	1303	Ship	71 25.1	158 55.9
114	X	X	247	1343	Ship	71 22.2	158 53.9
115	X	X	247	1438	Ship	71 18.8	158 49.5
116	X	X	247	1521	Ship	71 16.2	158 47.0
117	X	X	247	1627	Ship	71 13.6	158 43.1
118	X	X	247	1726	Ship	71 9.0	158 38.2
119	X	X	247	2140	Ship	70 49.2	160 13.7
120	X	X	247	2236	Ship	70 55.4	160 18.9
121	X	X	247	2313	Ship	70 57.5	160 24.3
122	X	X	248	0012	Ship	71 0.6	160 27.1
123	X	X	248	0054	Ship	71 3.2	160 29.5
124	X	X	248	0137	Ship	71 5.9	160 32.7
125	X	X	248	0244	Ship	71 8.9	160 36.5
126	X	X	248	0345	Ship	71 11.6	160 39.8
127	X	X	248	0541	Ship	71 17.0	160 47.7
128	X		248	1848	Ship	71 50.5	161 13.5
129	X		249	2338	Ship	72 0.0	160 0.0
130	X		249	0429	Ship	72 0.0	156 45.7
131	X		249	0648	Ship	72 0.0	155 25.5
132	X		249	0904	Ship	71 59.8	154 4.6
133	X		249	1158	Ship	71 59.2	152 48.5
134	X		249	1653	Ship	72 0.4	151 24.9
135	X		249	2341	Ship	72 0.1	150 7.3
136	X		250	0731	Ship	72 0.1	148 44.6
137	X		250	1840	Ship	71 50.0	148 43.5
138	X		251	0149	Ship	71 30.3	148 43.7

Table II, cont.

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
159		X	251	1140	Ship	71 29.6	150 2.7
160	X		251	1728	Ship	71 31.6	151 2.5
161	X		251	2036	Ship	71 31.2	151 35.3
162	X		252	0018	Ship	71 22.2	151 32.5
163	X		252	0252	Ship	71 31.7	152 25.2
164	X		252	0540	Ship	71 44.1	152 57.0
165	X		252	0952	Ship	71 43.7	154 17.3
166	X		252	1213	Ship	71 38.6	155 35.3
167	X		253	0633	Ship	72 19.4	155 6.6
168	X		253	1122	Ship	72 39.8	154 58.0
169	X		253	1648	Ship	72 59.9	155 1.4
170	X		253	2331	Ship	72 33.8	154 10.6
171	X		255	0233	Ship	72 11.6	154 43.0
172	X		255	0443	Ship	72 2.6	154 53.6
173	X		255	0622	Ship	71 53.1	154 58.5
174		X	255	0829	Ship	71 42.0	155 39.7
175	X						
176	X		255	0948	Ship	71 38.9	156 6.6
177		X					
178		X	255	1130	Ship	71 35.2	156 32.5
179	X						
180	X	X	255	1350	Ship	71 25.7	157 31.0
181	X						
182	X		255	1504	Ship	71 21.2	157 57.8
183	X	X					
184	X	X	255	1623	Ship	71 16.3	158 26.0
185	X						
186	X	X	255	1852	Ship	71 6.5	159 17.9
187	X	X					
188	X	X	255	2026	Ship	71 1.3	159 47.3
189	X						
190	X	X	255	2232	Ship	70 51.0	160 35.6
191		X					
192	X	X	256	0205	Ship	70 49.0	160 14.3
193	X						
194	X	X	256	0309	Ship	70 54.6	160 20.7
195	X						
196	X	X	256	0347	Ship	70 57.7	160 23.2
197		X					
198	X	X	256	0421	Ship	71 0.5	160 26.8
199							
200	X		256	0455	Ship	71 4.1	160 28.2
201		X					
202	X		256	0527	Ship	71 6.1	160 33.8
204	X		256	0559	Ship	71 8.9	160 37.1
205		X					
206	X		256	0630	Ship	71 11.6	160 40.1
207							
208	X	X	256	0713	Helo	71 16.7	160 42.8
209							
210	X	X	256	1447	Helo	71 36.9	159 7.3
211		X					

Table II, cont.

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
212	X		256	1555	Ship	71 31.5	159 2.2
213		X					
214	X	X	256	1647	Ship	71 28.1	158 59.5
215							
216	X	X	256	1723	Ship	71 25.1	158 56.2
217							
218	X	X	256	1803	Ship	71 22.3	158 52.9
219							
220	X	X	256	1838	Ship	71 19.5	158 50.3
221							
222	X	X	256	1922	Ship	71 16.5	158 45.2
223							
224	X	X	256	2017	Ship	71 13.7	158 43.8
225							
226	X	X	256	2131	Ship	71 8.8	158 38.2
227							
228	X	X	257	0135	Ship	71 26.0	156 49.0
229							
230	X		257	0238	Ship	71 31.6	156 55.1
231							
232	X	X	257	0339	Ship	71 34.3	156 57.7
233							
234	X	X	257	0426	Ship	71 37.1	157 1.7
235							
236	X	X	257	0504	Ship	71 39.9	157 4.6
237							
238		X	257	0549	Ship	71 41.6	157 9.2
239	X						
240	X	X	257	0620	Ship	71 45.4	157 10.9
241							
242	X	X	257	0659	Ship	71 48.2	157 14.8
243							
244	X	X	257	0756	Ship	71 55.0	157 21.5
245							
246	X	X	257	1536	Ship	72 5.0	155 32.4
247							
248	X	X	257	1704	Ship	71 59.7	155 25.3
249							
250	X	X	257	1802	Ship	71 56.8	155 21.8
251							
252	X	X	257	1855	Ship	71 54.0	155 17.7
253							
254	X	X	257	2016	Ship	71 50.2	155 13.3
255							
256	X	X	257	2109	Ship	71 48.5	155 11.6
257							
258	X	X	257	2210	Ship	71 45.6	155 8.2
259							
260	X	X	257	2313	Ship	71 42.8	155 4.5
261							
262	X	X	258	0046	Ship	71 33.7	154 49.9
263							

## IV. SATELLITE IMAGERY

### A. Ice Coverage

The satellite images obtained from the Geophysical Institute, University of Alaska, before the cruise were extremely helpful, resulting in several modifications to the ship's track to avoid heavy ice.

The NOAA and LANDSAT images in the visible band gave some information on the location of the ice, but unfortunately clouds often obscured the view. The LANDSAT image reproduced in Figure 4 shows a view off Pt. Barrow on 4 August when the ice was close to shore. A NOAA image taken on 20 August (Figure 5) shows the ice has moved northwestward. Notice the ridge of older ice, which appears white in both images. During the 16-day interval between the two photographs, the ridge has moved westward, and the ice floe has broken up near the edge.

In Figure 5, there appears to be a movement of ice toward the coast near Wainwright. As this ice nears the coast, it is swept along in the Alaskan Coastal Current. This recirculation was observed in 1971 and 1972, when occupied ice camps were swept into the coastal current. A view of the ice on 10 September off Harrison Bay is shown in Figure 6. The edge of the pack is made up of large, separated floes intermingled with small fragments.

Figure 7 shows conditions off the coast from Pt. Barrow to Barter Island on 18 September. Even though much of the area is obscured by haze, it can be seen that the ice floes near the edge of the pack are more widely separated.

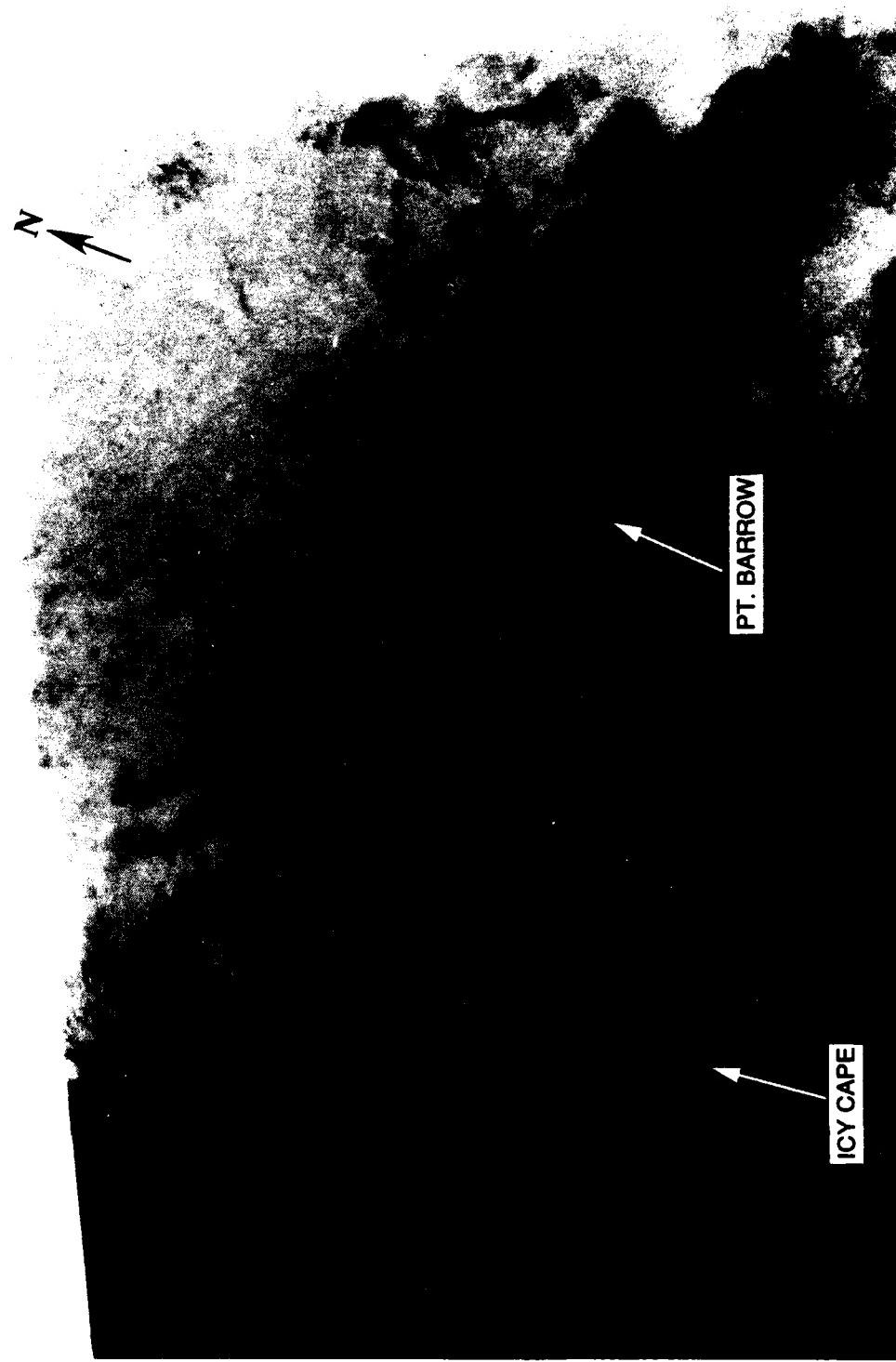
### B. Infrared Temperatures

Some NOAA images in the infrared frequencies were enhanced to obtain details at temperatures of interest. Figure 8 shows a NOAA image for 5 August in which the temperatures from -2 to +8°C have been enhanced so that each degree corresponds to a small shift in the dot density of the gray scale. It is difficult to identify individual temperatures, but the scale varies from white for the ice, which is below -2°C, to black for the open water near shore, which is at about 8°C. The land is warmer than the enhancement region and thus shows as white. The path of the coastal current past Pt. Barrow is clearly shown as a plume that ends in eddies and mixing, with a branch at right angles that follows the edge of the land.

Figure 9 shows a second enhancement for the same data as Figure 8. In this enhancement, each 1° change in temperature is shown by a contrasting shade on the gray scale, but the shades do not necessarily become progressively darker. The figure shows a temperature change from 0°C for open water (white) to 4° (black) and on to warmer temperatures (using white again and gradually darkening shades) up to the coastal current maximum of 6 or 7°C.



*Figure 4. Ice conditions off Pt. Barrow on 4 August as seen in a LANDSAT image.*



*Figure 5. Ice conditions off the coast on 20 August as seen in a NOAA satellite image.*



*Figure 6. Ice conditions off Harrison Bay on 10 September as seen in a LANDSAT image.*

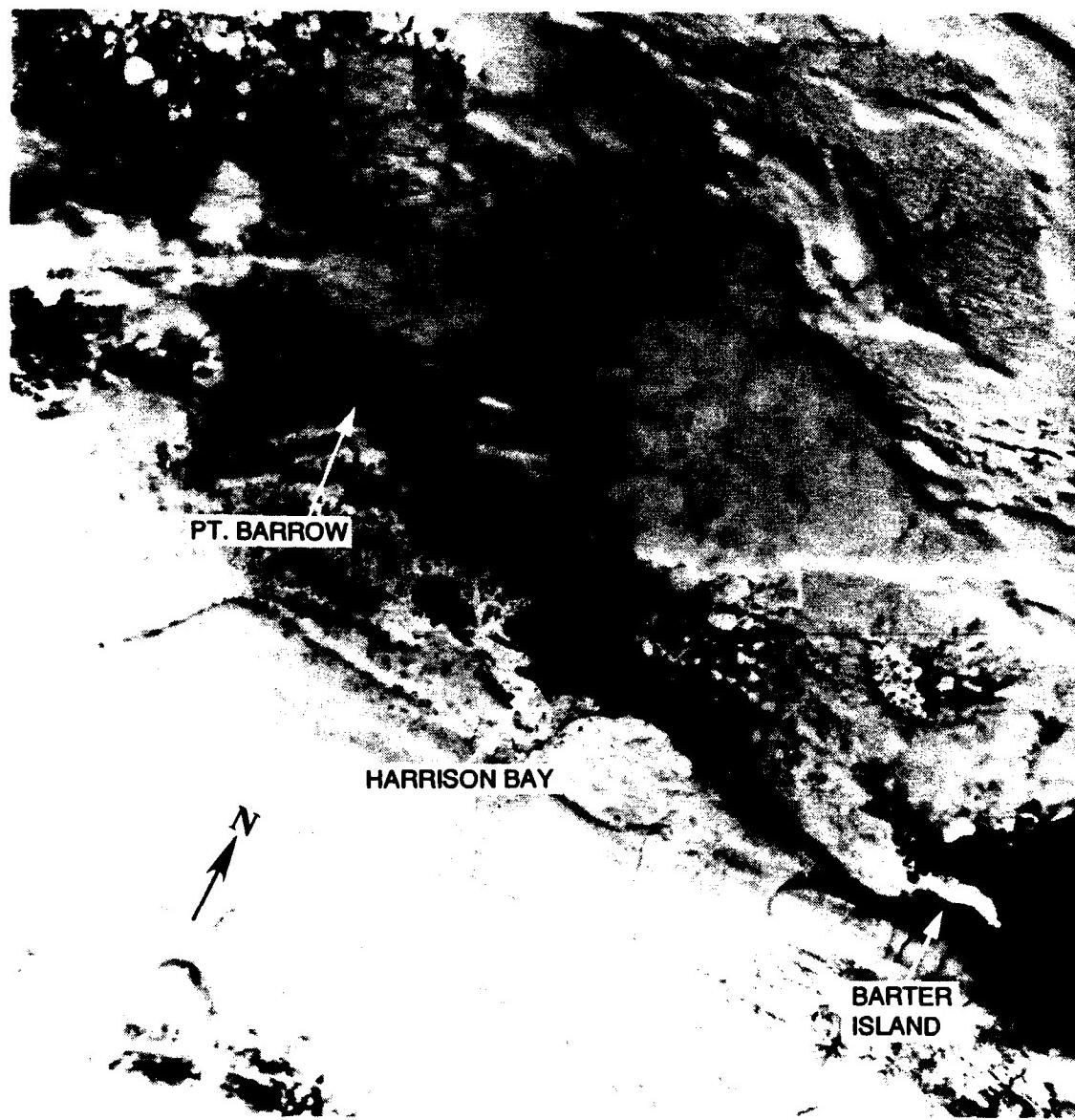


Figure 7. Ice conditions off the coast from Pt. Barrow to Barter Island on 18 September as seen in a NOAA satellite image.

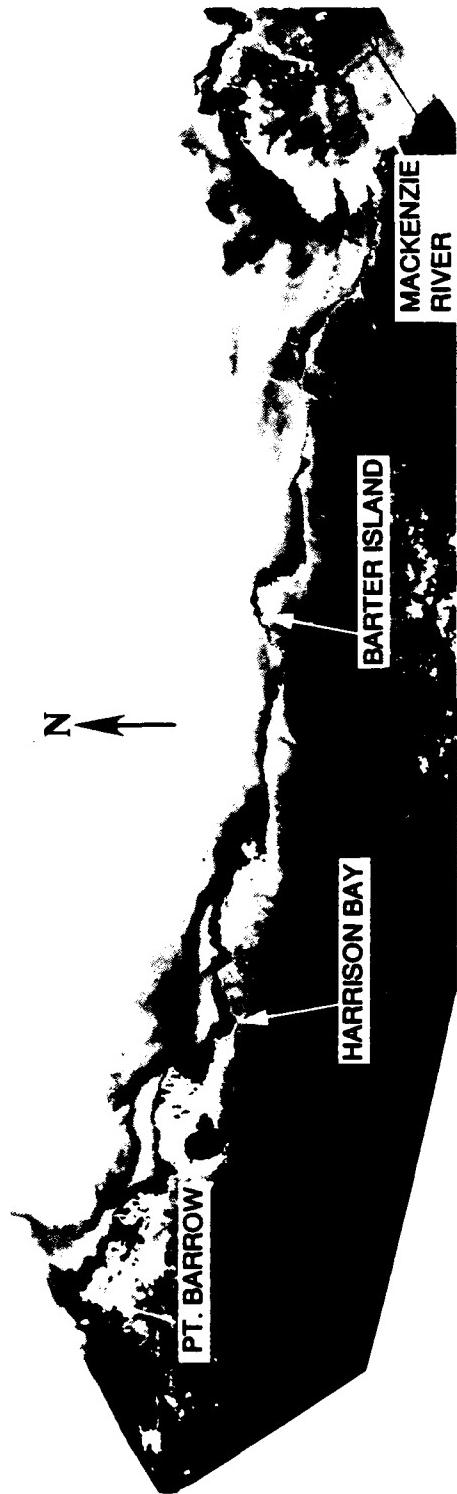


Figure 8. An enhanced NOAA IR image on 5 August that shows by gray scale the transition from white for the ice below  $-2^{\circ}\text{C}$  to black at  $8^{\circ}\text{C}$  for the warm open water along the shore.

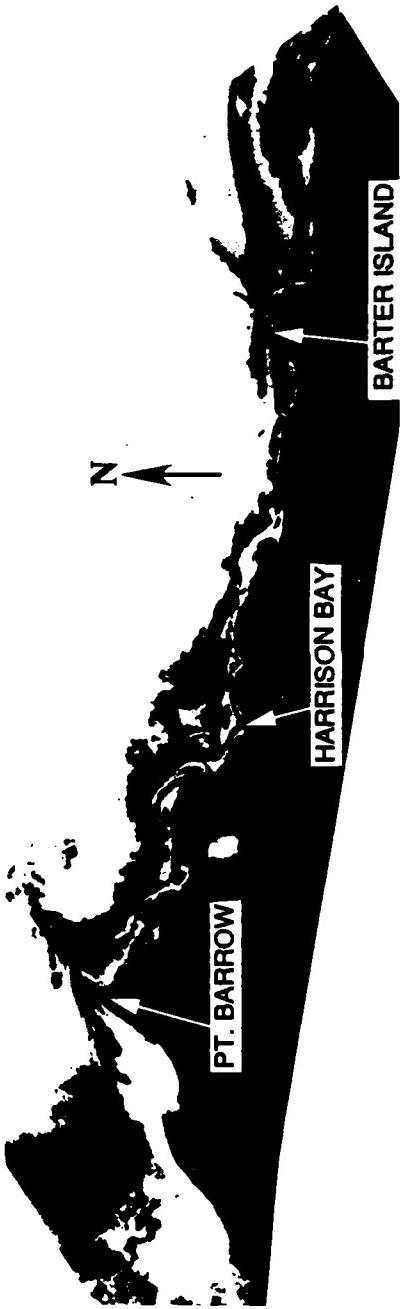


Figure 9. A NOAA satellite image on 5 August that shows an enhanced IR for  $0\text{--}4^{\circ}\text{C}$ . Beyond the black at  $4^{\circ}\text{C}$  there is another white and some successively darker grays that indicate higher temperatures.

The most valuable enhancement was for 0 to 4°C on 25 August (Figure 10). Both the open water at 0°C and the core of 4°C water off Pt. Barrow show up as black. Between these black areas is a series of 1° increments — shown as medium gray, dark gray, and light gray — representing temperatures of 1, 2, and 3°C. The core of 4°C water off Pt. Barrow is followed by white and light grays, indicating temperatures above 4°C.

The image gives the impression that the warm coastal current continues past Pt. Barrow for about 100 miles before it mixes or disappears beneath the ice (see Figure 16 in next section). Only a small amount turns the corner and follows the coast eastward. This branch may extend to Cape Halkett; the warm areas shown farther east are probably due to warming from sunlight in the shallows. This warm surface water shown in the satellite image is closer to the coast than the ship's CTD stations, and thus the image gives added information on the extent of the intrusion.

The warm plume with a core of about 6°C from the Mackenzie River outflow is plainly visible in the satellite IR images. Judging from the extent of water  $>-2^{\circ}\text{C}$  in Figure 8 for 5 August, it affected an area 185 km wide that extended about 130 km seaward. Another enhancement of the Mackenzie River outflow is shown in Figure 11. The temperatures represented are not accurately known, but the pattern is helpful when compared with Figure 8.

Some details of the temperature pattern can be seen in Figure 12, an enhancement for 5 August of the area off the coast from Pt. Hope to Pt. Barrow. Going from coldest to warmest, the temperature gradations begin with black in the open sea, representing  $<0^{\circ}\text{C}$ , then white, at about 1°C, then to several contrasting grays, and back to black again, representing about 5°C. A second white near Pt. Franklin and along the coast south of Wainwright, representing temperatures  $>5^{\circ}\text{C}$ , is followed by darker shades representing even higher temperatures off Pt. Hope. There are two bands of clouds, which can be identified over the land and which have to be ignored. The image shows that a large portion of the flow is northward off Pt. Hope in addition to the flow close along the coast toward Pt. Barrow.

Figure 13 shows the same area, with a different enhancement, for 17 August, a day with no cloud interference. The elongated stream past Pt. Barrow indicates how far the warm water is carried before it mixes or encounters the ice. The streamer ends at 149°W, which is inside the reported ice boundary (see Figure 15 in next section). As will be shown in Section XI, this agrees with the extent of the warm coastal current indicated by the oceanographic measurements.

The status of the coastal current on 5 September is shown by the two enhancements in Figure 14. As the northward flow passes Pt. Hope, it appears to divide into two branches, one to the north and the other along the coast. The band along the coast is at 6°C, whereas the large extension to the north is at 5°C.

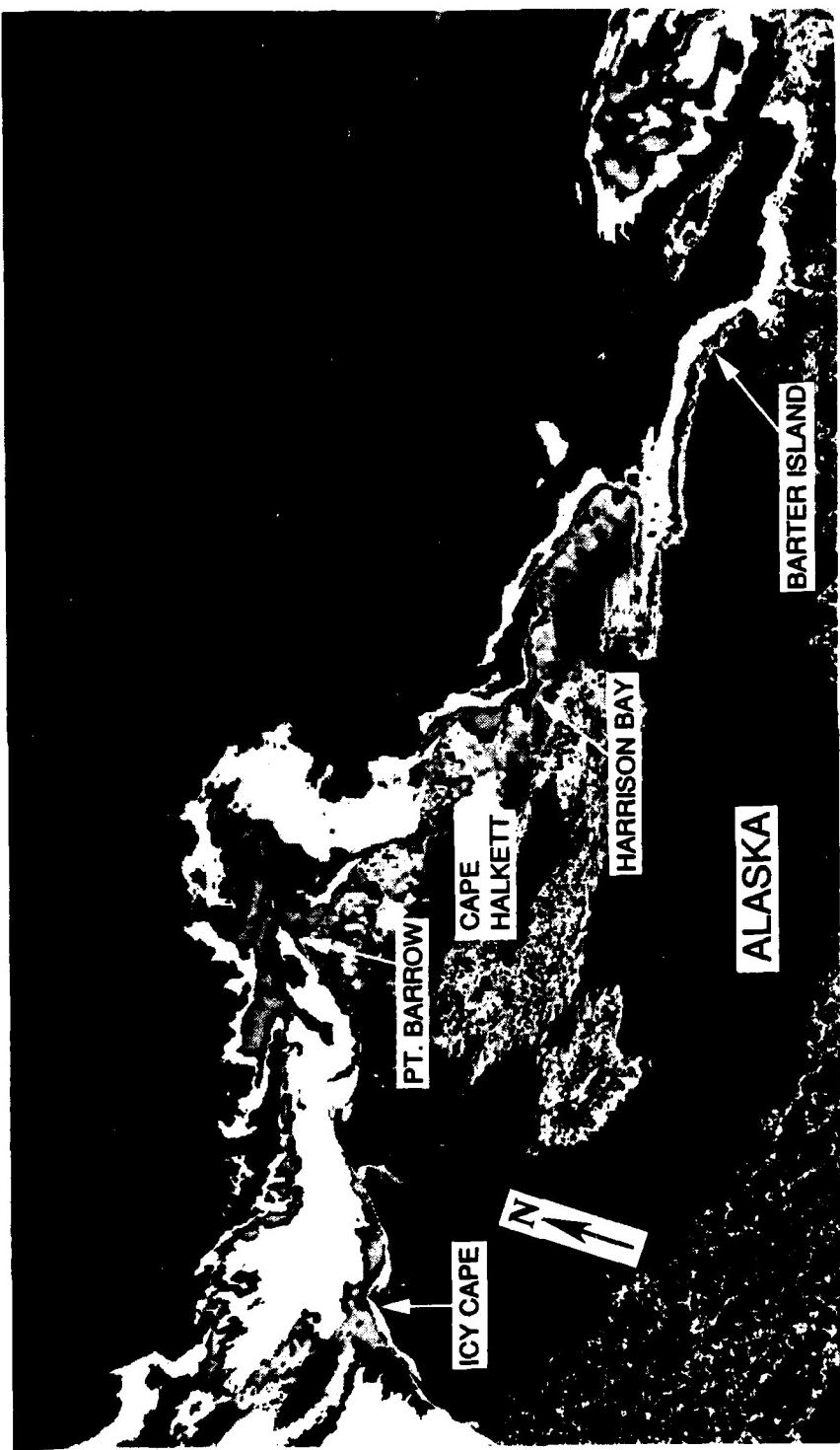
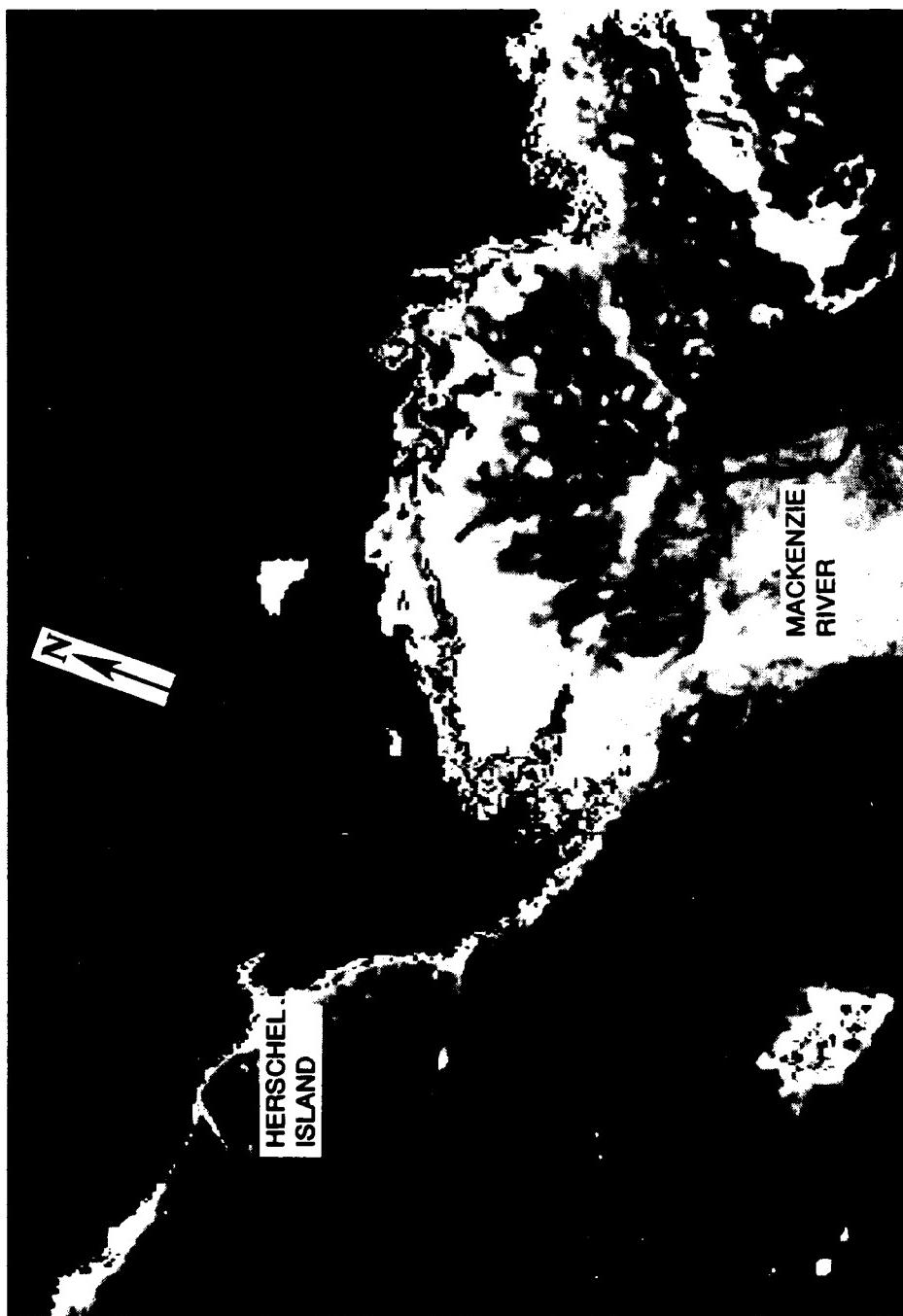


Figure 10. A NOAA satellite image for 25 August with a 0-4° IR enhancement. Contrasting gray scales were used to show 1° temperature gradations from open water at 0°C to a black core at 4°C and some white and gray for higher temperatures.



*Figure 11. An enlarged enhanced image of the Mackenzie River outflow on 5 August for comparison with Figure 8.*

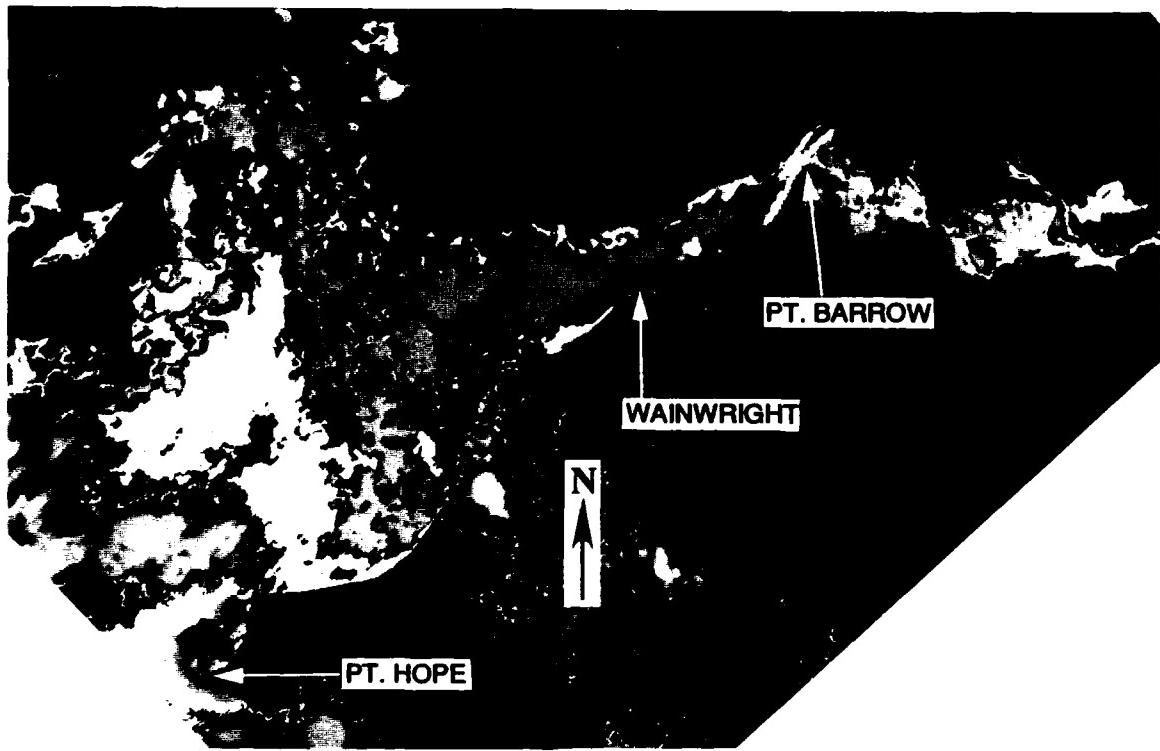


Figure 12. An enhanced image for the southern Chukchi Sea on 5 August showing the pattern of the northerly current past Pt. Hope.

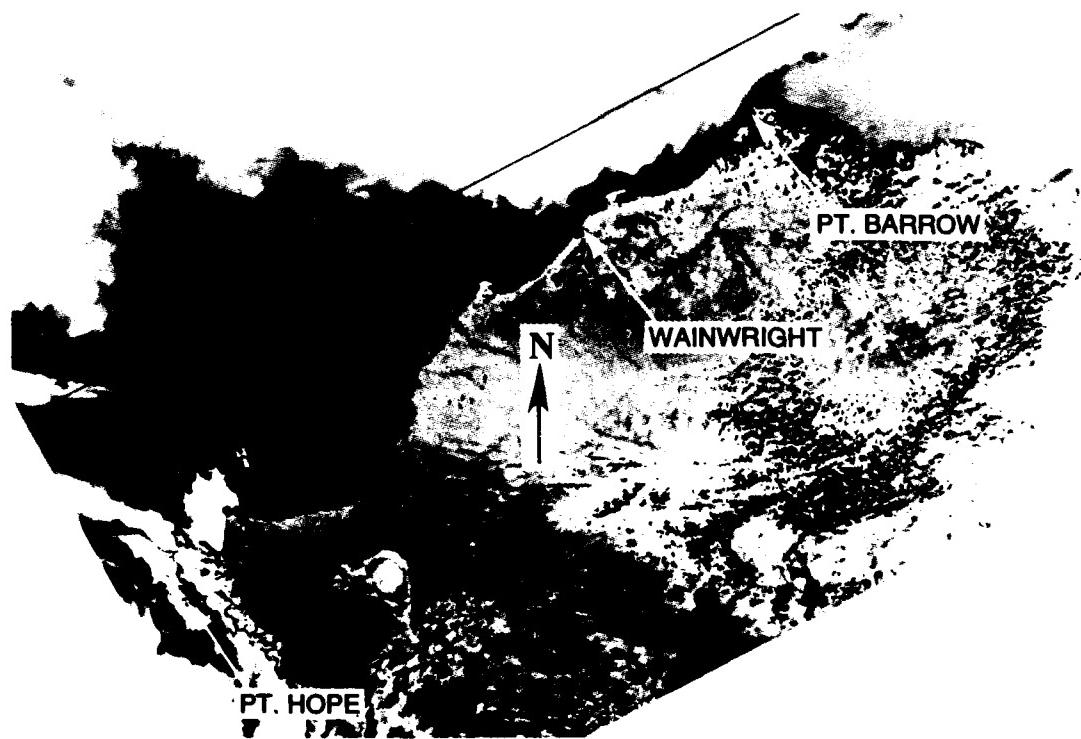


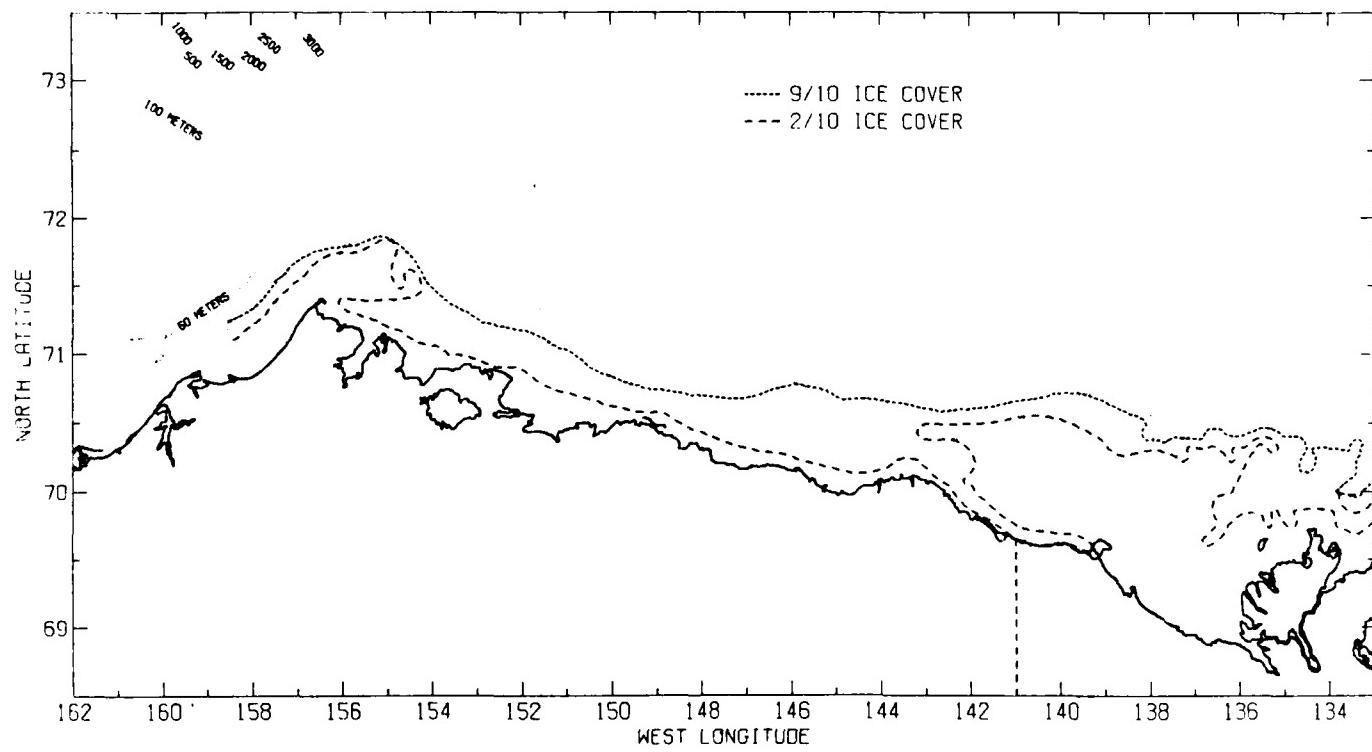
Figure 13. Another enhancement for 17 August showing the pattern of the northerly current past Pt. Hope.



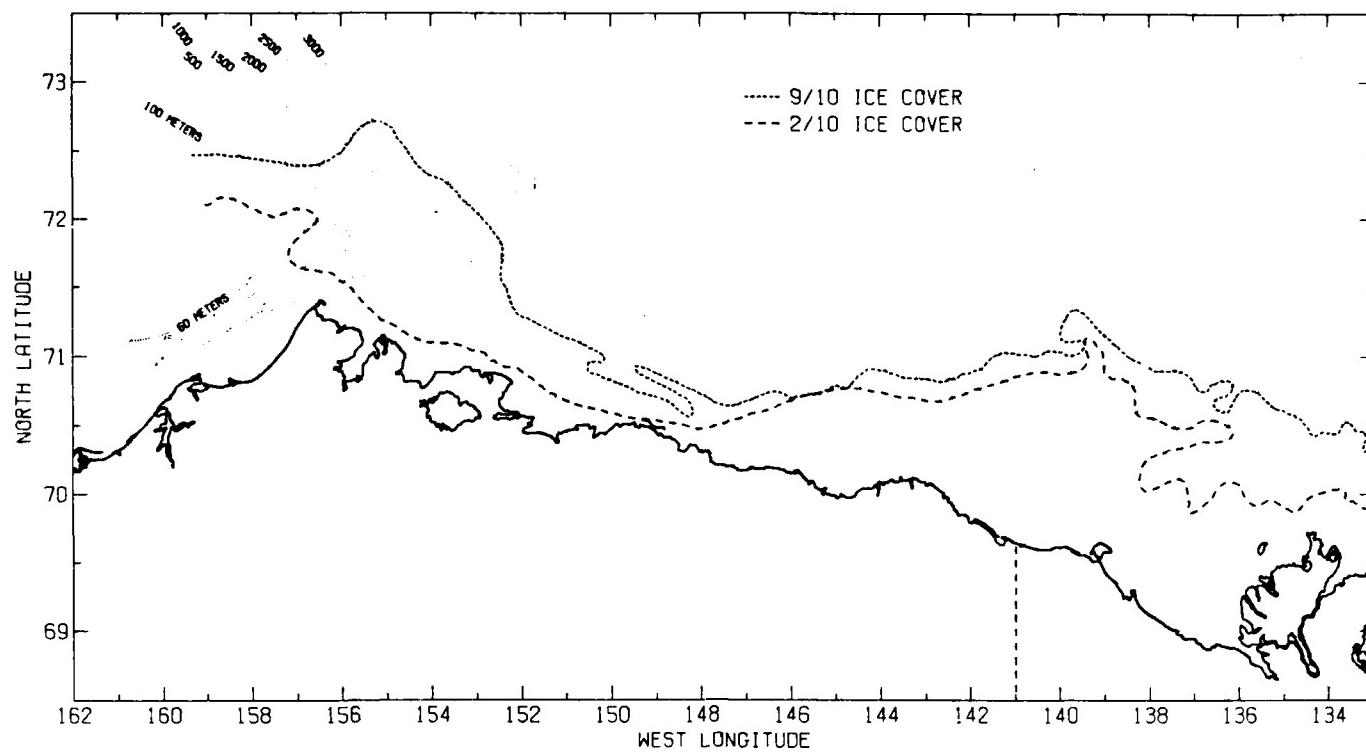
Figure 14. Two enhancements for 5 September showing the spread of the coastal current north of Pt. Hope.

## V. ICE CONDITIONS

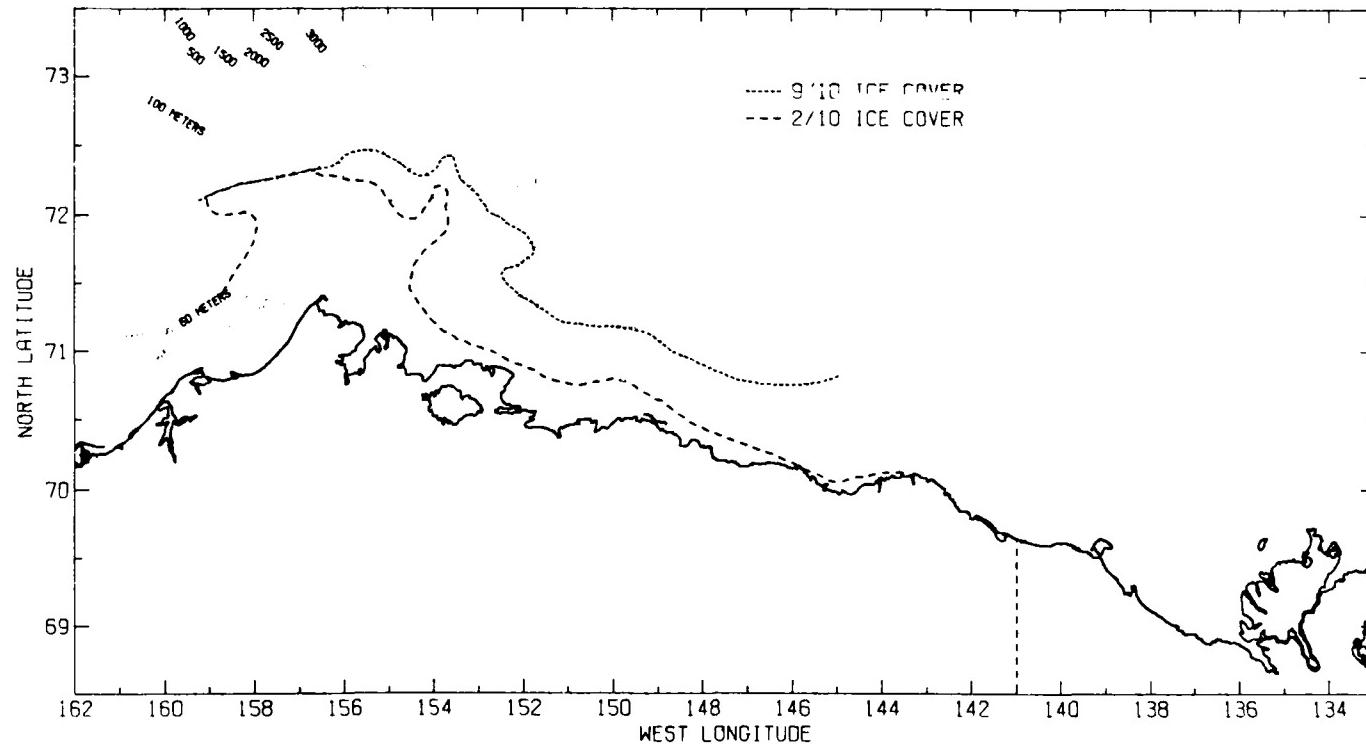
Ice reports were received from Environment Canada, Ice Control, Ottawa, once a day by radio facsimile on the *Polar Sea*. These consisted of a plot of the 2/10 and the 9/10 coverage lines. Although reports were obtained each day, some were faulty and some showed no change. We have selected as representative the coverage charts for 18 and 27 August and 3, 9, and 13 September and plotted the 2/10 and 9/10 lines in Figures 15–19 for the five days. The ice cover near the time of each of the two surveys of the Barrow Canyon area is shown in Figures 20 and 21. The changes during the 27 day period are shown in Figures 22 and 23, in which we have plotted each line for all 5 days on one graph. The ice is receding in both areas where a warm intrusion occurs. Some westerly movement of the ice is evident, which helps to open up large areas west of Pt. Barrow and west of the Mackenzie River. The winds reported by the ship (Section III) do not seem sufficiently easterly to produce this effect. The movement may be more a result of the Beaufort Gyre.



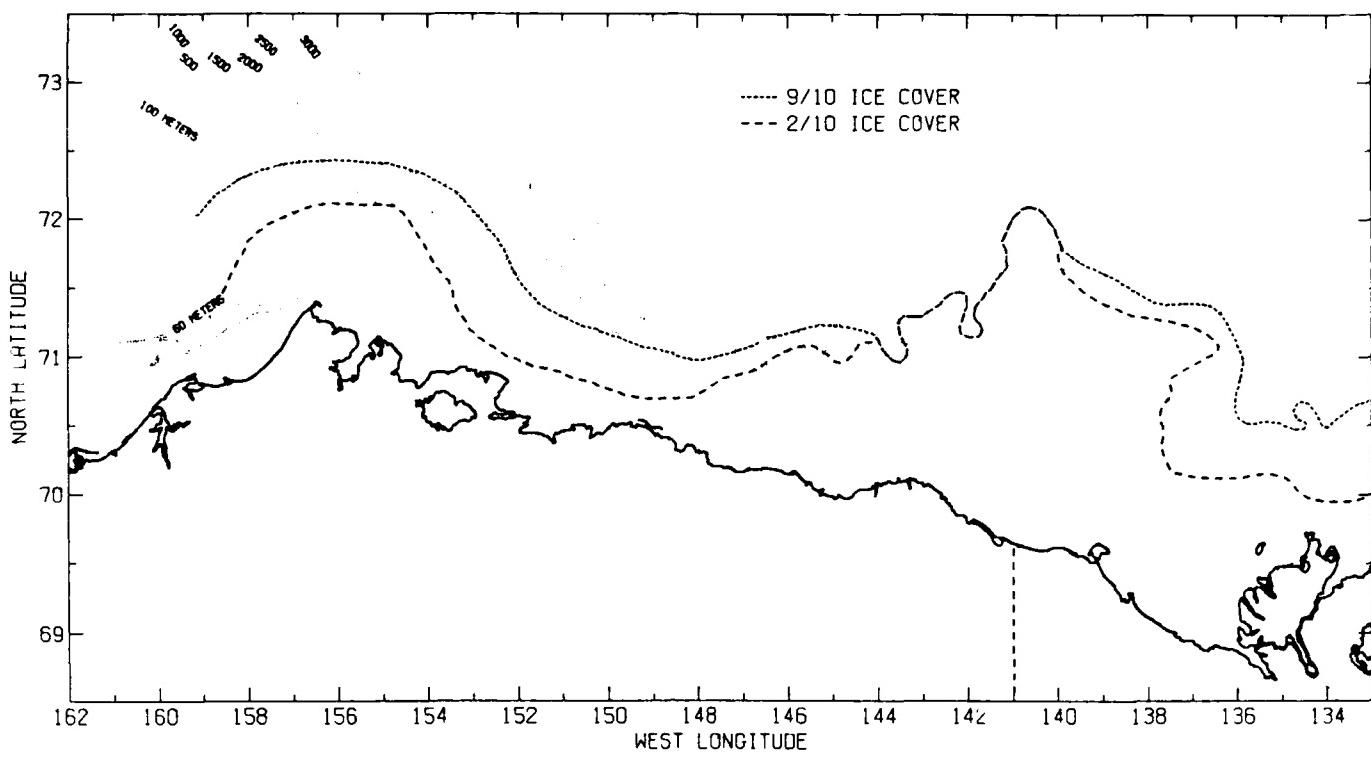
*Figure 15. Ice cover reported for 18 August by Environment Canada.*



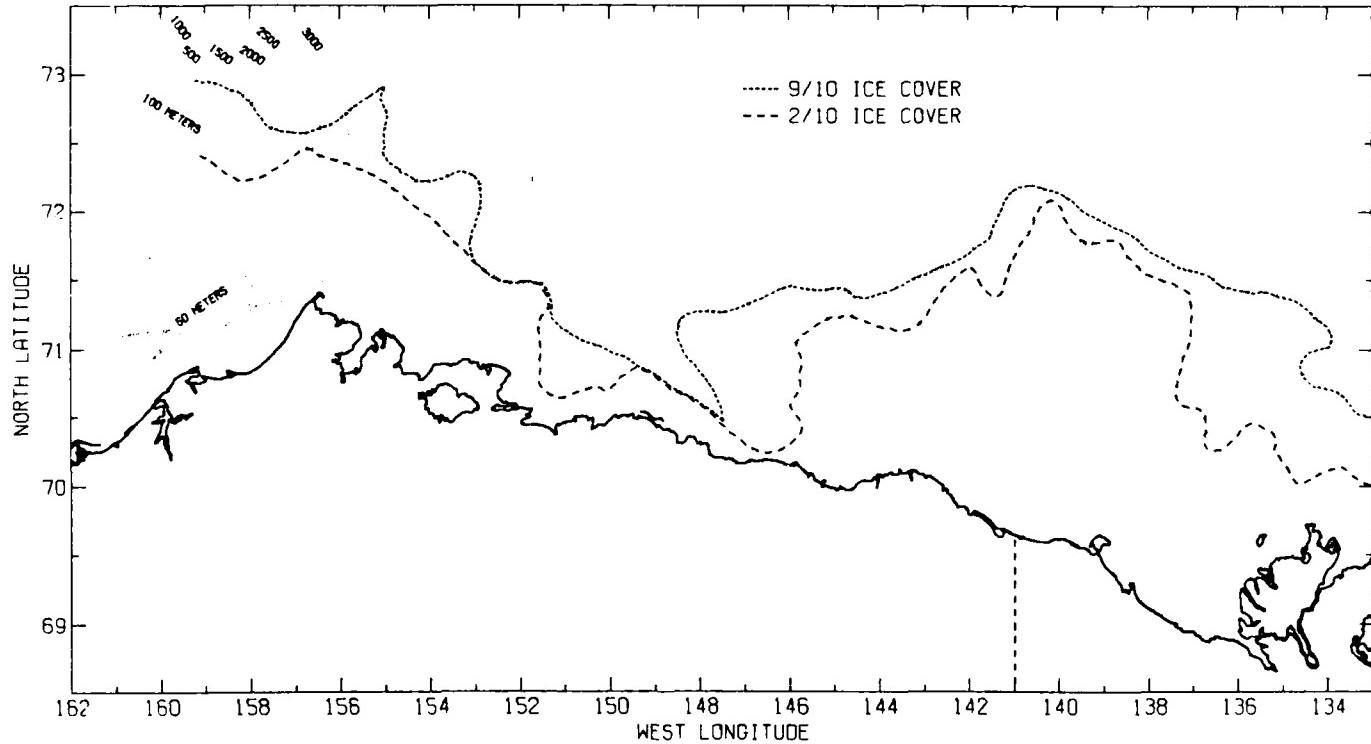
*Figure 16. Ice cover reported for 27 August by Environment Canada.*



*Figure 17. Ice cover reported for 3 September by Environment Canada.*



*Figure 18. Ice cover reported for 9 September by Environment Canada.*



*Figure 19. Ice cover reported for 13 September by Environment Canada.*

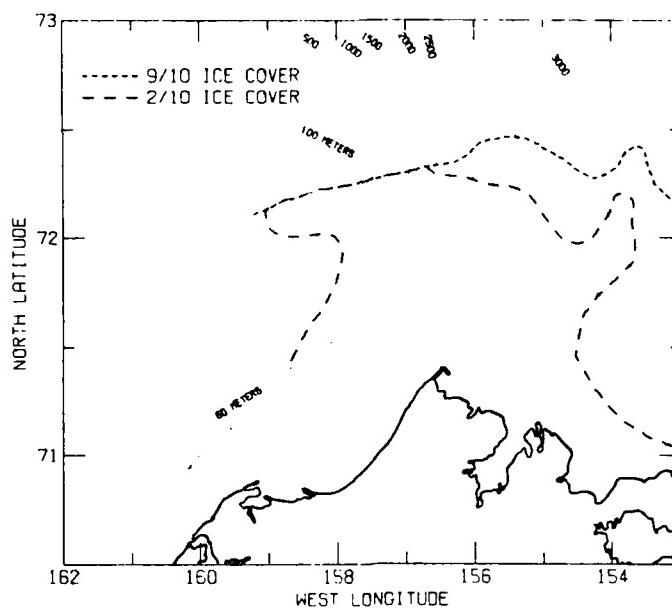


Figure 20. Ice cover reported for 3 September. This is representative of the first Barrow Canyon study.

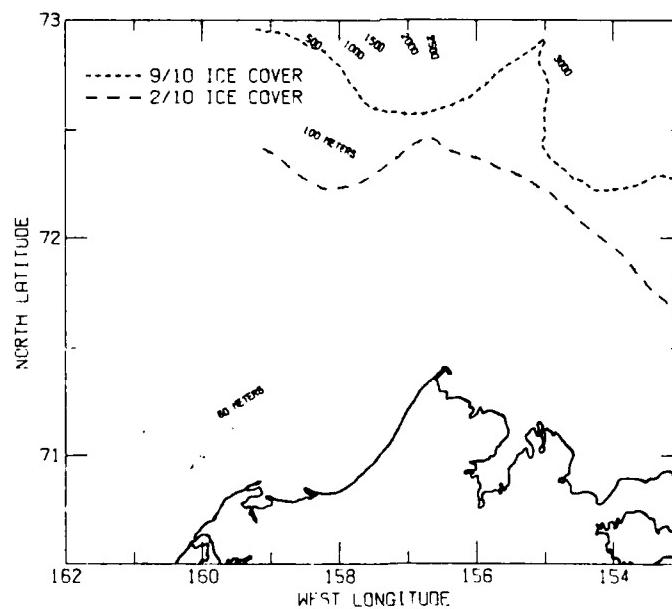
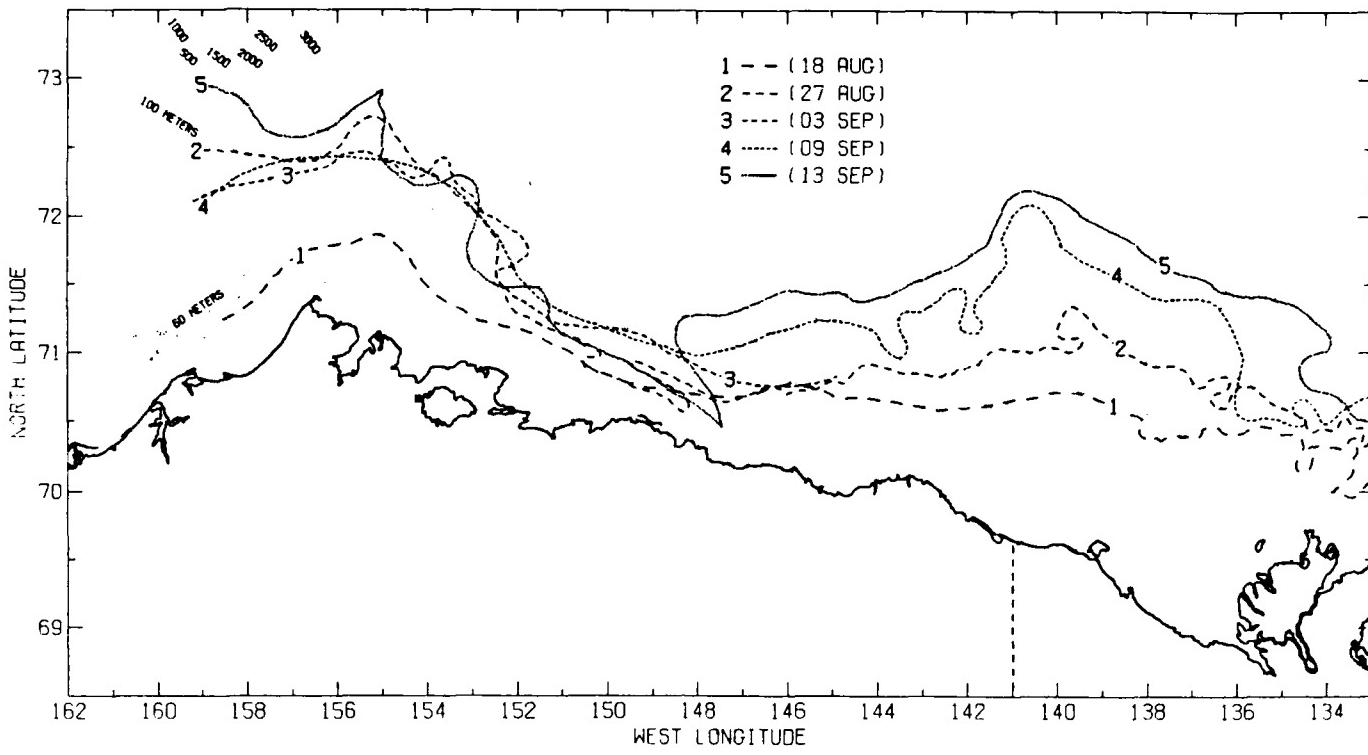
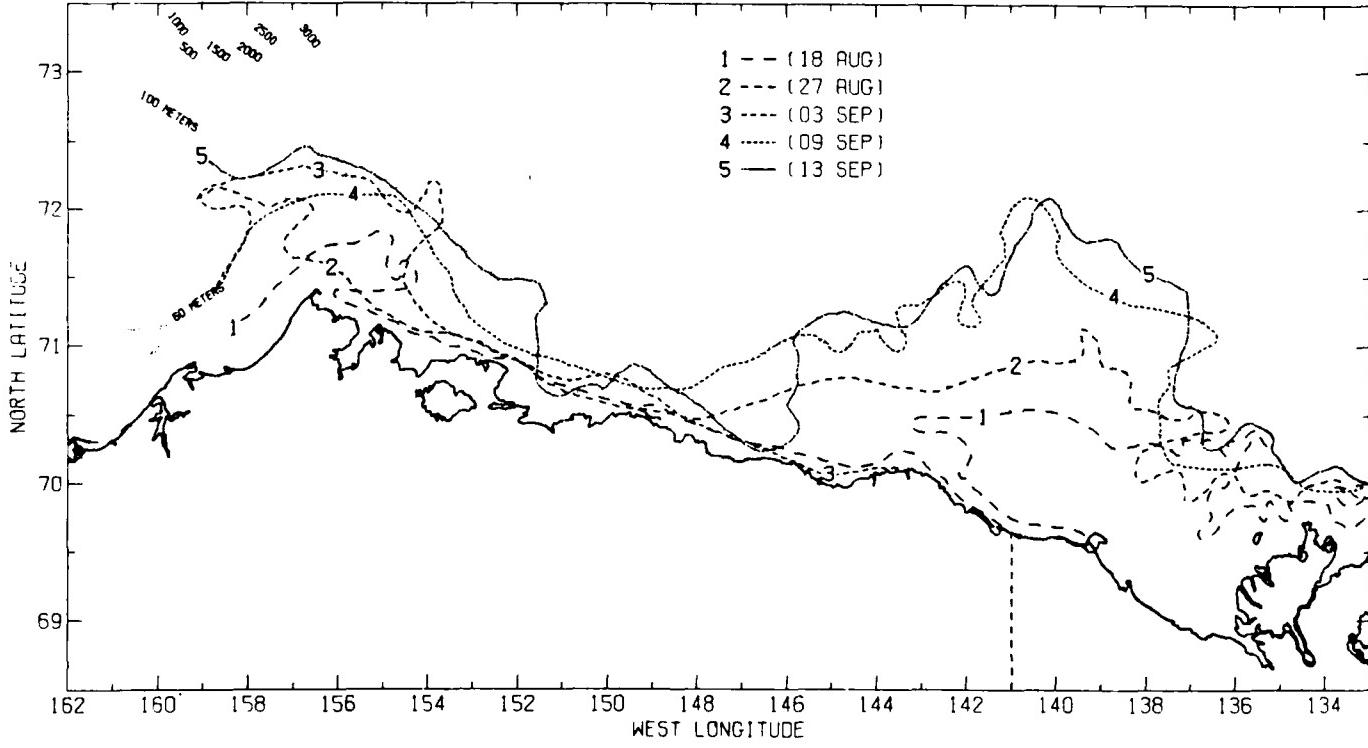


Figure 21. Ice cover reported for 13 September. This is representative of the second Barrow Canyon study.



*Figure 22. Lines representing 9/10 ice cover for weekly intervals during the cruise.*



*Figure 23. Lines representing 2/10 ice cover for weekly intervals during the cruise.*

## VI. RIVER RUNOFF

Gauging measurements for the Mackenzie River have been obtained from Environment Canada. The 1985 data, however, are available only in preliminary form. A summary of the monthly runoff at a station on the main channel that is reported to represent at least 84% of the Mackenzie River flow is given for the 12 years prior to 1985 in Figure 24. Preliminary data for 1985 indicate that the monthly distribution was typical of the previous 12 years. The annual runoff, with a 12-year average of  $282 \text{ km}^3/\text{year}$ , is plotted in Figure 25, along with the preliminary value of  $293 \text{ km}^3/\text{year}$  reported for 1985. This is a transport of 0.01 Sv compared with 0.6 Sv for the Alaskan Coastal Current northward through Bering Strait. Assuming this runoff was distributed over the area seen on the IR image (or on the surface temperature plot in Figure 60), we calculated the thickness of water added by the river during June–August and during the year. The results are shown in Table III.

A study<sup>14</sup> of the Mackenzie River delta shows average temperatures as follows: May,  $0^\circ\text{C}$ ; June,  $7^\circ\text{C}$ ; July,  $15^\circ\text{C}$ ; August,  $14^\circ\text{C}$ ; September,  $3^\circ\text{C}$ ; October,  $0^\circ\text{C}$ . Since the river water is still cold in May, only the June–August flow would be effective in warming the surface layer. Table III shows that this warm water could be 4–5 m thick, indicating that the Mackenzie River may have an appreciable effect on ice melt some 200 km (108 n.mi.) from the mouth, perhaps farther at times when the discharge pattern is thinner or more elongated.

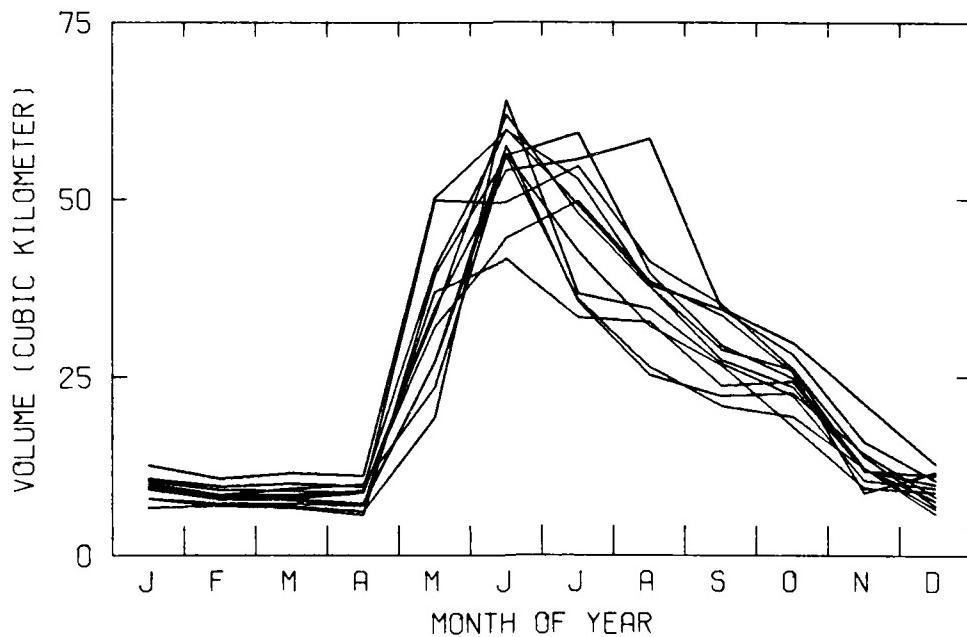


Figure 24. Monthly totals for Mackenzie River flow, 1973–1984.

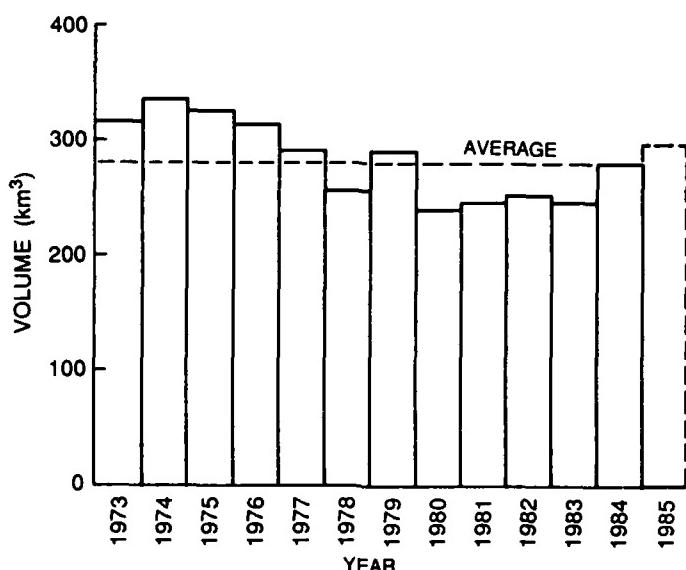


Figure 25. Annual Mackenzie River flow for years 1973-1984 as reported by Environment Canada. A preliminary value for 1985 has been added.

Table III. Thickness of layer produced (volume/area).

	3 Mo. Flow	Yearly Flow
Warm area from IR image 185 × 130 km	5.7 m	11.8 m
Warm area from CTD near-surface temperature 220 × 150 km	4.1 m	8.6 m

In making these calculations, other rivers that enter the Beaufort Sea between Pt. Barrow and the Mackenzie have been ignored, since the flow from even the largest of these, the Kuparik River (which has an annual flow of about  $1.2 \text{ km}^3$ ) and the Sagavanirktok River (which has an annual flow of about  $1.0 \text{ km}^3$ ), is small compared with that of the Mackenzie River ( $282 \text{ km}^3/\text{year}$ ).

From the records of river flow and temperature provided by Environment Canada, we compute that the heat added (with respect to the ambient water temperature of  $-2^{\circ}\text{C}$ ) by the Mackenzie River for the year was  $2.4 \times 10^{15}$  kilocalories. Using the temperature profiles shown in Appendix A, we estimate the heat added to the water column was  $3 \times 10^{15}$  kilocalories — in close agreement. The effect of Mackenzie River runoff on salinity should be several times as great as on temperature, because of the drastic difference in the salinity of fresh and seawater and the greater effective volumes involved (an entire year's flow of fresh water vs 3 mo. of warm water).

A similar calculation for the heat change caused by the Alaskan Coastal Current in and east of the Barrow Canyon gives  $6 \times 10^{15}$  kilocalories. This means that the Mackenzie River, with 1/60 the volume input by the Alaskan Coastal Current through Bering Strait, has nearly as much influence in the Beaufort Sea. This is mainly because only a small portion of the flow through Bering Strait enters the Beaufort Sea via the Barrow Canyon. A secondary reason is that more heat is lost during the longer travel of the coastal current. These comparisons stress the importance of the Mackenzie River to Beaufort Sea oceanography.

## VII. TEMPERATURE AND SALINITY MEASUREMENTS

Two CTD systems were operated during the cruise, one by ASL and the other by APL. Each system had its advantages, and the duplication provided added confidence in the results. In this section, we will first describe the instrumentation and its calibration, and then present the data in the form of vertical profiles and temperature-salinity (TS) diagrams.

### A. Instrumentation

The CTD unit used by ASL was a Neil Brown system (Model III, Serial No. D1-01-2904-1). The sensors were attached to the end of the cable on the ship's oceanographic winch, and the upper end of the cable was connected to a recording system.

During the cruise, all data were recorded on magnetic media as raw sensor signals in real time. Processing was performed at varying time scales and to varying extents, from immediate plotting of all calculable and directly observable parameters (ASL) to spot checking and limited plotting of some parameters (APL). This was facilitated through use of the ASL Hewlett-Packard 110 portable "lap-top" computer system. This system not only logged data at 5 Hz in real time, but stored the raw data on disk and then calculated and plotted all parameters, using routines stored in RAM, by means of simple commands from the keyboard. This enabled the watch-standers to examine enhanced or modified profiles immediately as well as TS plots and tabular listings. The availability of the system and its flexibility were of unquestionable value both at the time and during subsequent processing.

Post-processing of ASL data was a simple matter of assigning station numbers to all casts and selecting the most appropriate format parameters for compatibility with the APL data.

The CTD system used by APL has been described in a previous report.<sup>15</sup> The system was manufactured at APL and used as a lightweight portable profiler for numerous arctic expeditions. A small hand-powered winch, with a tape recorder mounted in the hub to avoid the need for slip rings, was fastened in place on the deck. The sensor cable was supported on a light boom 2 m forward of the ASL system. The APL cast was usually made immediately after the ASL cast was completed. Occasionally, the APL CTD system was operated from a helicopter which landed on the ice. At the completion of the APL cast, the cassette tape was removed and taken to a dry laboratory, where preliminary plots of the temperature and salinity profiles were produced in half an hour.

Post-processing of APL data consisted of rerecording the data on the cassettes onto nine-track tape, selecting calibration constants, eliminating obvious errors, and plotting vertical profiles and TS diagrams.

## B. Calibration

Calibration of the two instrument systems was checked routinely. This was done by taking Nansen bottle samples at depths where properties were stable and determining their salinities with a laboratory salinometer calibrated with standard seawater.

The ASL Neil Brown CTD system was post-calibrated at the Northwest Regional Calibration Center (NRCC) in a continuing program of regular calibrations at that facility. The APL CTD system employed sensors with long calibration histories and known stability; the sensors were calibrated 6 mo. before the cruise and recalibrated 2 mo. afterward at NRCC.

Comparison of both systems with bottle samples, combined with post-calibration, indicated 95% confidence levels of  $\pm 0.01^{\circ}\text{C}$  for temperature,  $\pm 0.02\%$  for salinity, and  $\pm 0.25$  m for depth.

## C. Vertical Profiles

Vertical profiles of temperature, salinity, sound speed, and density ( $\sigma_T$ ) were obtained with both the ASL and APL CTD units. Usually ASL's was employed first and APL's immediately afterward. The ASL system could be operated to a depth of 550 m, whereas the APL unit was limited to 300 m by the cable length. The ASL probe was considered too valuable to risk contacting the bottom. The APL probe was lowered to the bottom routinely and thus obtained additional information on bottom layers.

CTD stations were occupied at intervals along lines perpendicular to the coast as will be discussed in the next section. An example of the plotted profiles is shown in Figure 26. When both units were operated at the same station, the two profiles are plotted on the same page. At the bottom of the page are tabulated values of the parameters at 5 m depth intervals, increased to 10 m intervals at middle depths and 15 m at lower depths. At the top of the plot are indicated the station number, time, and location and the system and platform in use.

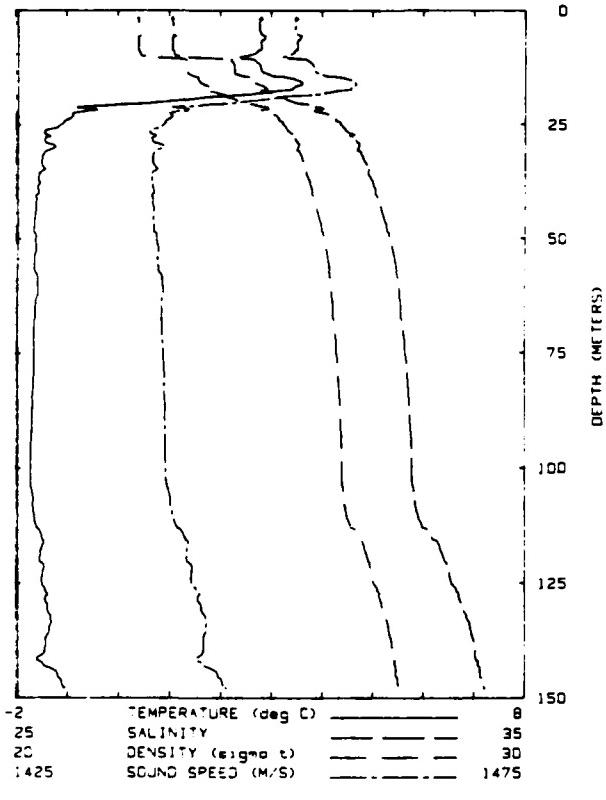
Each laboratory had its own method of presenting the profiles. The two sets of profiles should agree except for slight changes with location or time during the half hour between the two casts, when some ship drift may have occurred. At times, only the ASL system was used on board. When a helicopter was used as a platform, only the APL system was employed.

All profiles are presented in Appendix A in the order taken. A separate station number was given to each CTD system when both were used at the same location.

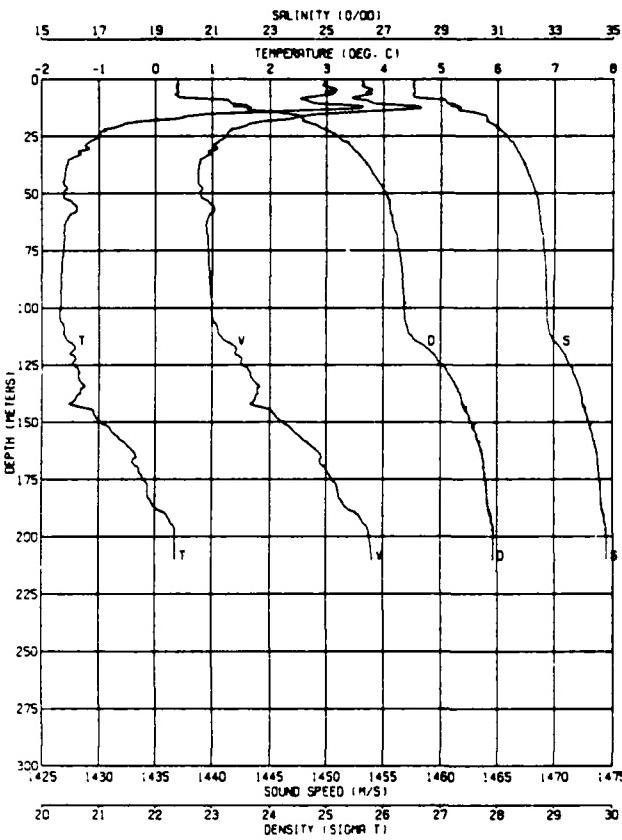
Often when there is a sharp change in temperature there is also one in the other properties. If the temperature and conductivity are not measured for the same water, or

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
77	X		246	0650	Ship	72 1.9	155 29.6
78		X					

77



78



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY (M/sec)
-----------------	-----------	---------------------	----------------------	----------	---------	-------------------------

2.0	2.0	2.03	25.775	26.046	22.385	1452.6
1.7	1.7	3.80	25.764	26.055	22.384	1452.5
0.4	2.45	25.803	26.080	22.384	1452.6	
11.1	11.2	2.70	26.654	26.209	23.319	1453.7
18.2	18.1	3.61	27.777	26.716	23.650	1458.3
21.0	20.8	-0.19	25.688	26.771	24.728	1442.9
26.3	26.1	-1.37	25.305	26.480	25.319	1438.3
31.8	31.8	-1.47	25.467	26.785	25.595	1438.4
35.0	34.8	-1.42	25.806	26.921	25.693	1438.9
35.9	35.7	-1.54	25.508	26.811	25.889	1438.3
39.8	39.6	-1.55	25.801	26.053	25.803	1430.5
44.9	44.6	-1.82	25.653	26.198	25.923	1438.4
50.1	49.8	-1.81	25.701	26.334	26.033	1438.7
55.2	54.0	-1.85	25.813	26.441	26.119	1438.8
60.2	59.8	-1.57	25.938	26.520	26.182	1439.4
65.2	64.8	-1.63	25.924	26.586	26.221	1439.2
70.2	69.7	-1.68	25.939	26.614	26.280	1439.2
75.1	74.6	-1.85	25.876	26.833	26.282	1439.4
80.0	79.5	-1.85	26.012	26.702	26.322	1439.5
84.8	84.3	-1.80	26.008	26.738	26.352	1439.5
89.7	89.1	-1.88	26.021	26.754	26.374	1439.6
94.8	94.0	-1.71	26.031	26.761	26.397	1439.6
99.9	98.0	-1.72	26.030	26.780	26.404	1439.6
104.3	102.7	-1.71	26.051	26.807	26.418	1439.6
109.1	106.4	-1.88	26.138	26.888	26.486	1440.2
114.0	113.2	-1.58	26.387	33.100	26.852	1441.0
119.0	118.0	-1.51	26.818	33.383	26.883	1441.7
123.7	122.9	-1.48	26.770	33.528	26.897	1442.2
128.7	127.0	-1.40	26.960	33.701	27.134	1442.8
133.3	132.4	-1.31	27.154	33.682	27.262	1443.6
138.1	137.1	-1.41	27.170	33.899	27.376	1443.3
142.9	141.8	-1.57	27.088	34.083	27.448	1442.8
147.7	146.6	-1.10	27.556	34.168	27.503	1443.2
148.7	147.0	-1.04	27.647	34.222	27.544	1443.8

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/oo)
5.1	3.12	1453.9	22.39	28.07
10.4	2.78	1454.1	23.32	29.21
15.1	.96	1449.5	24.33	30.36
20.3	-.59	1442.9	24.84	30.90
25.1	-.98	1441.3	25.21	31.34
30.3	-1.17	1440.4	25.47	31.65
35.3	-1.55	1438.9	25.64	31.86
40.3	-1.60	1438.8	25.80	32.05
45.0	-1.63	1438.8	25.93	32.20
50.0	-1.63	1439.0	26.04	32.34
55.2	-1.42	1440.0	26.12	32.44
60.2	-1.55	1439.7	26.15	32.48
65.3	-1.61	1439.5	26.19	32.53
70.2	-1.62	1439.6	26.24	32.59
75.0	-1.64	1439.6	26.27	32.63
80.2	-1.66	1439.7	26.31	32.67
85.3	-1.67	1439.7	26.33	32.70
90.3	-1.66	1439.9	26.35	32.72
95.3	-1.67	1440.0	26.37	32.74
100.2	-1.68	1440.0	26.37	32.75
110.1	-1.63	1440.5	26.44	32.83
120.0	-1.52	1441.9	26.87	33.37
130.4	-1.37	1443.3	27.18	33.75
140.2	-1.43	1443.6	27.37	33.99
150.9	-.95	1446.2	27.62	34.31
160.2	-.49	1448.7	27.71	34.45
170.1	-.29	1450.0	27.77	34.54
180.0	-.14	1451.0	27.82	34.61
190.0	.18	1452.7	27.90	34.73
200.1	.35	1453.8	27.93	34.76
210.1	.35	1454.0	27.93	34.78
210.1	.35	1454.0	27.93	34.78

Figure 26. Sample presentation of CTD profile (above) and tabulated data at 5-15 m intervals (below).

equivalent water, the computed salinity, which depends on both temperature and conductivity, will show an erroneous reading followed by a gradual change back to the correct one. Such errors have to be considered before ascribing a decrease in salinity with depth as an indication of instability, which is unlikely but possible if there are differential water movements. Because of this possible equipment error when sudden temperature changes occur, we hesitate to state that any of the observed salinity excursions represent unstable conditions. One exception is station 99, where a 6 m thick layer of water at 6°C was found in water at 2°C. The layer appears to be more dense than water just below it. Readings within and below the layer were numerous and steady; therefore, we think that the change is real, and that this was an unstable condition.

#### D. TS Diagrams

Temperature-salinity diagrams have been plotted for many of the profiles, for both units. An example is shown in Figure 27. Near-surface variations usually make up about half the diagram and often result in loops and excursions when steep gradients are present. Composite diagrams will be presented in Section X.E, and the region of each water type will be outlined.

TS diagrams for most of the stations are shown in Appendix B. The APL diagrams have two sigma-T lines and are all at the same scale. The ASL diagrams have been expanded to show more detail. Some missing diagrams and missing salinity plots cannot be recovered without considerable delay in publication.

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
75	X	X	246	0531	Ship	72 4.1	155 36.6
76	X	X	246	0650	Ship	72 1.9	155 29.6
77							
78							

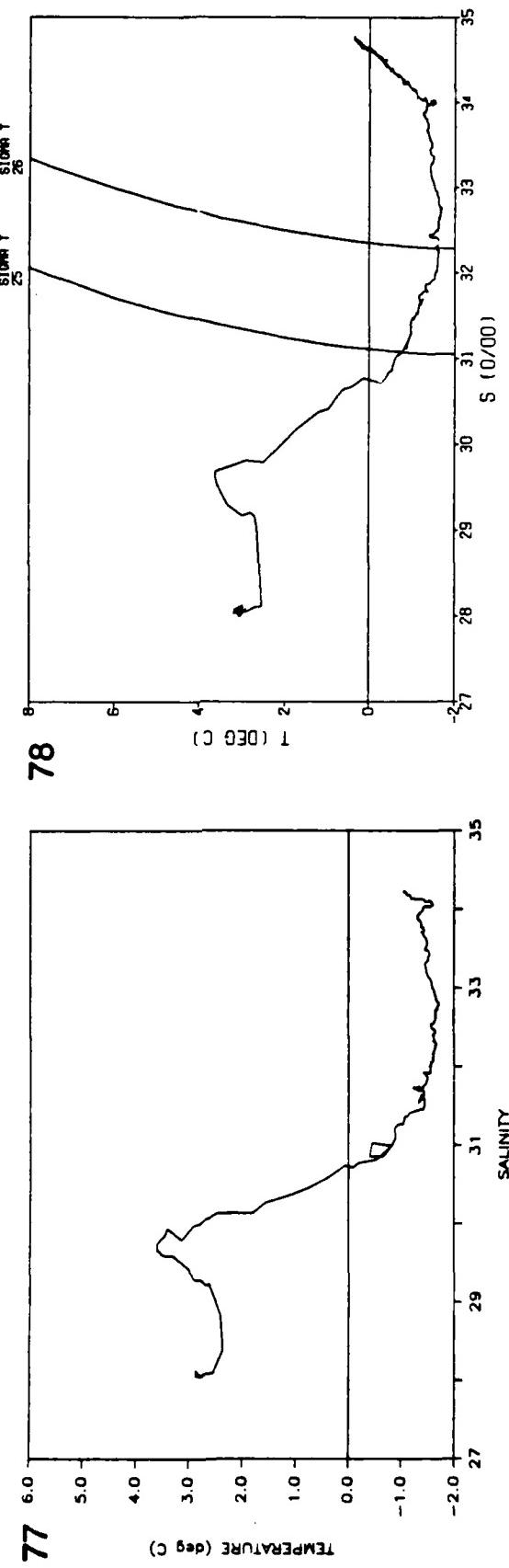


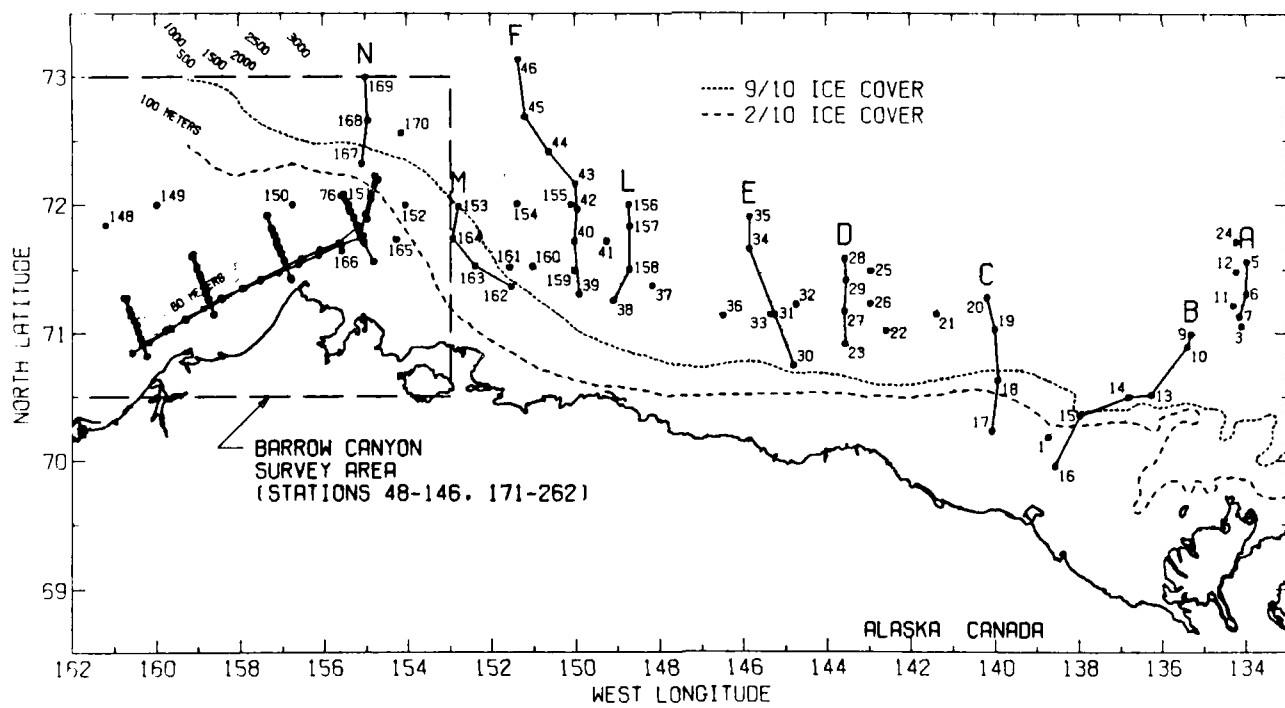
Figure 27. An example of the TS diagrams which appear in Appendix B. The APL (lightweight profiler) result is at right and the ASL (Neil Brown) result is at left.

### VIII. SECTION PLOTS

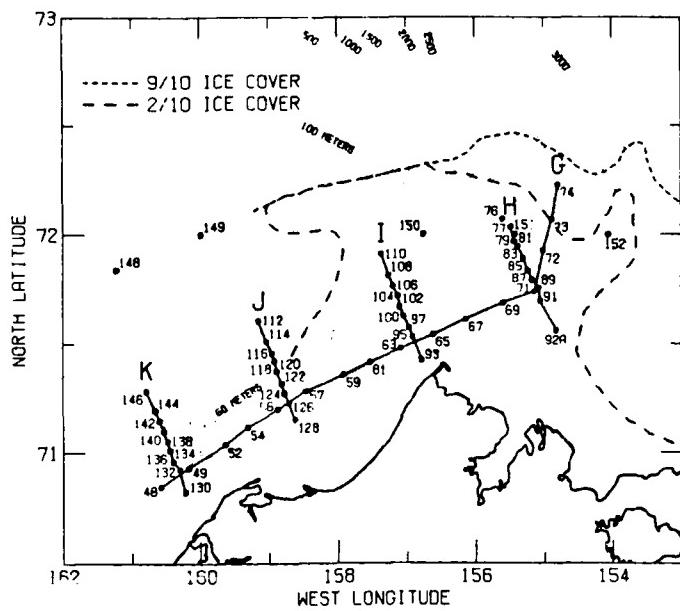
Stations along lines either parallel or perpendicular to the coast were combined to form vertical sections of temperature or salinity. The selected lines, as well as the ice cover in each area at the time the stations were occupied, are shown in Figures 28–30.

The first longitudinal section through the Barrow Canyon (section G) did not follow the path of the cold Chukchi Sea bottom water. An alternate for section G (labeled G') has been constructed by using stations with the maximum amount of this cold layer (see Figure 31). In constructing the sections, isotherms and isohalines were drawn to make a smooth and logical variation between stations. The sections are presented in Figures 32–51.

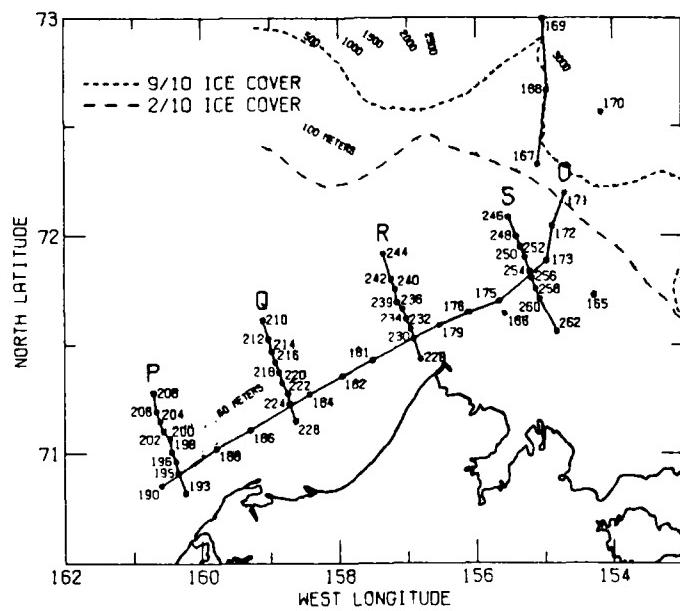
In the temperature sections, two types of water are delineated by shading. The first is water warmer than  $+1^{\circ}\text{C}$ , which we arbitrarily considered an intrusion, either from the coastal current or from river runoff. The second is water colder than  $-1.5^{\circ}\text{C}$ , which includes the bottom water that appears to form in the Chukchi Sea along the coast in the winter and move downward along the bottom of the Barrow Canyon in the spring.<sup>16,17</sup>



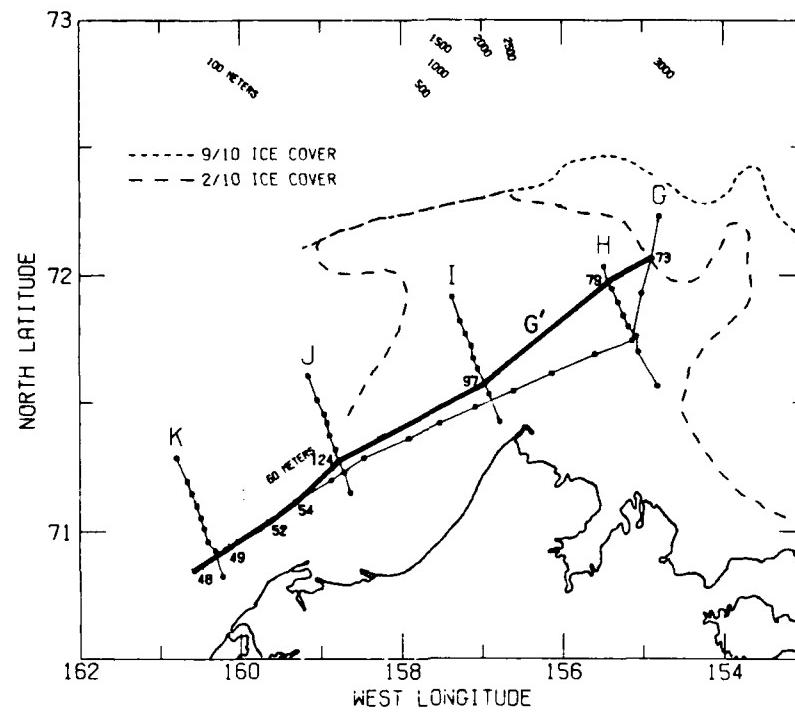
**Figure 28.** Selected cross sections for the survey (see details of Barrow Canyon surveys in next two figures).



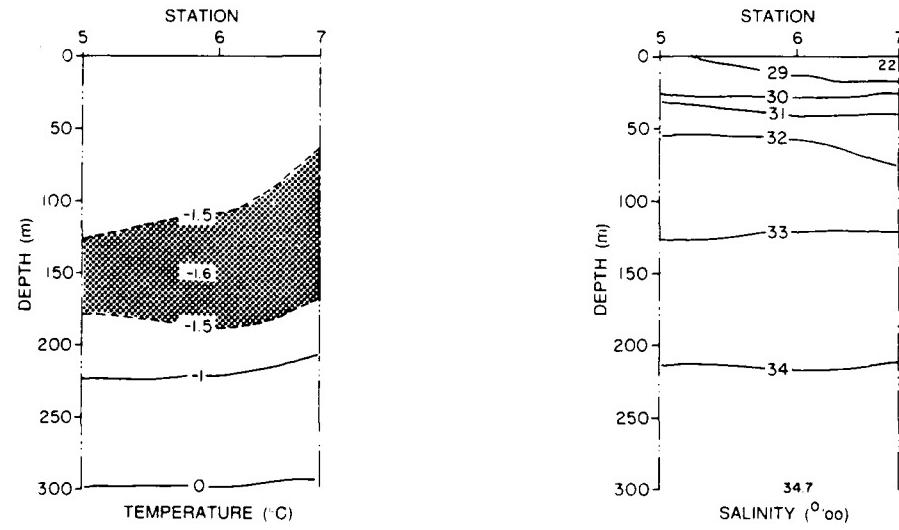
*Figure 29. A longitudinal section and four cross sections for the first survey of the Barrow Canyon area.*



*Figure 30. A longitudinal section and four cross sections for the second survey of the Barrow Canyon area.*



**Figure 31.** Section  $G'$ , an alternate to Section  $G$  that better traces the bottom water down the Barrow Canyon.



**Figure 32.** Line A cross sections showing temperature and salinity.

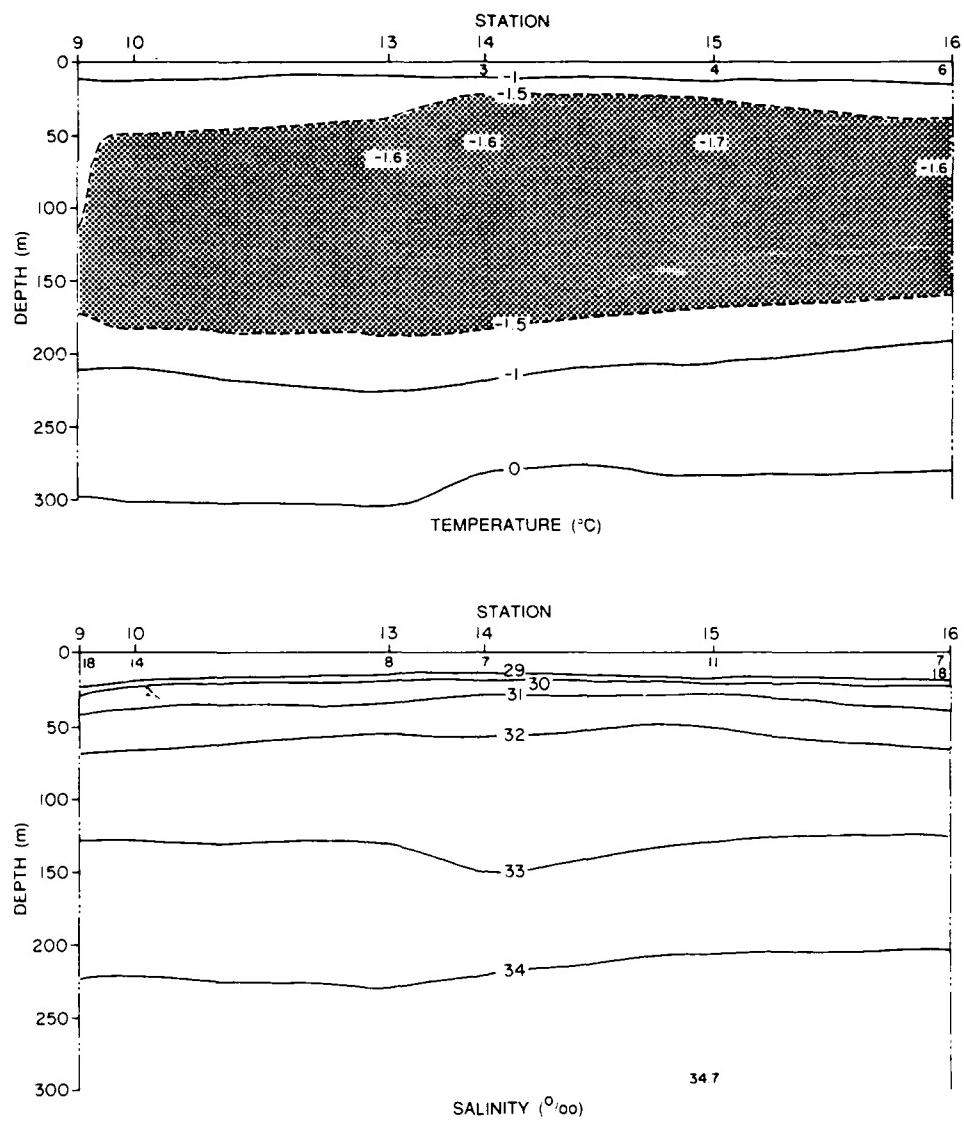


Figure 33. Line B cross sections showing temperature and salinity.

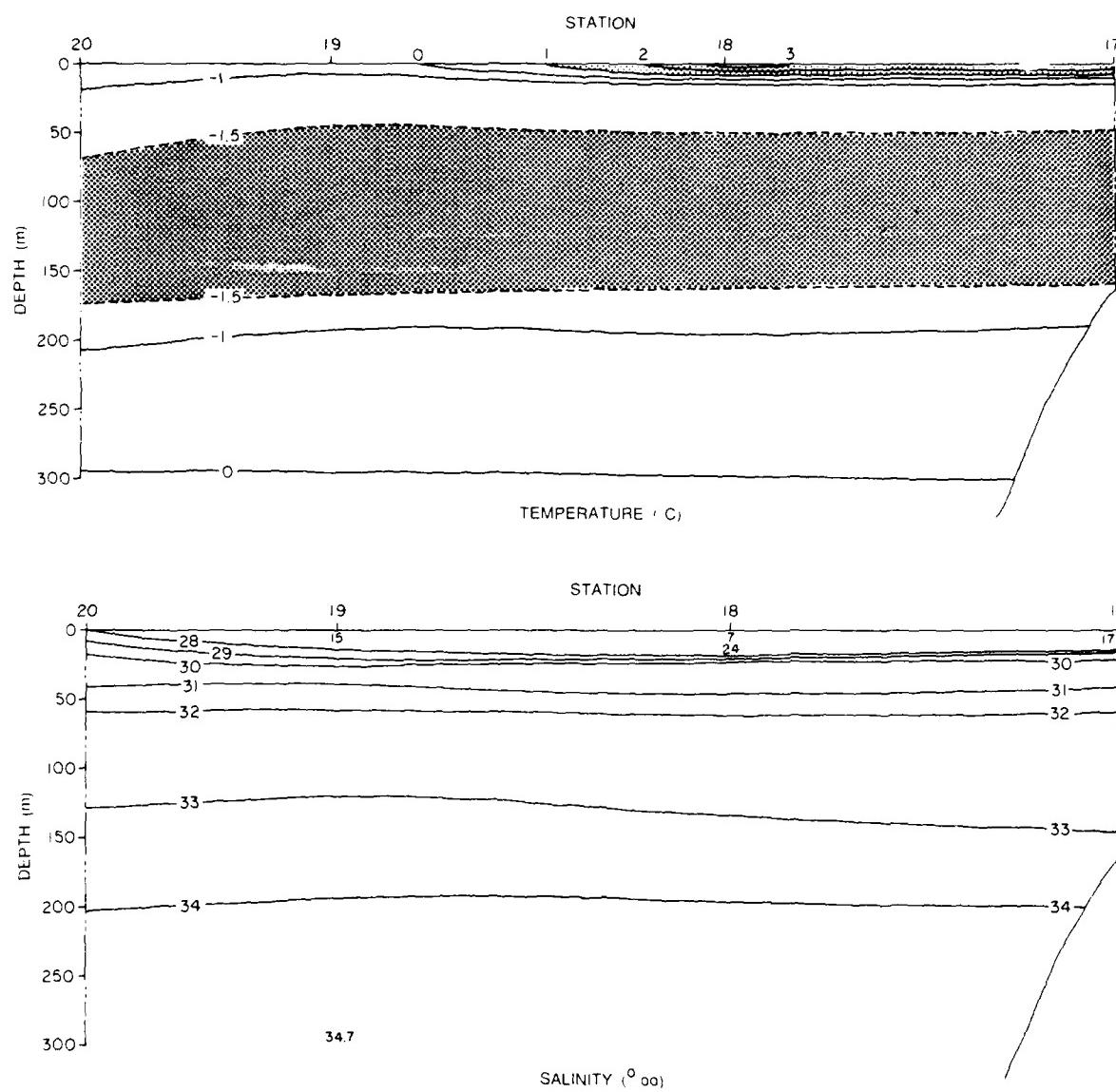


Figure 34. Line C cross sections showing temperature and salinity.

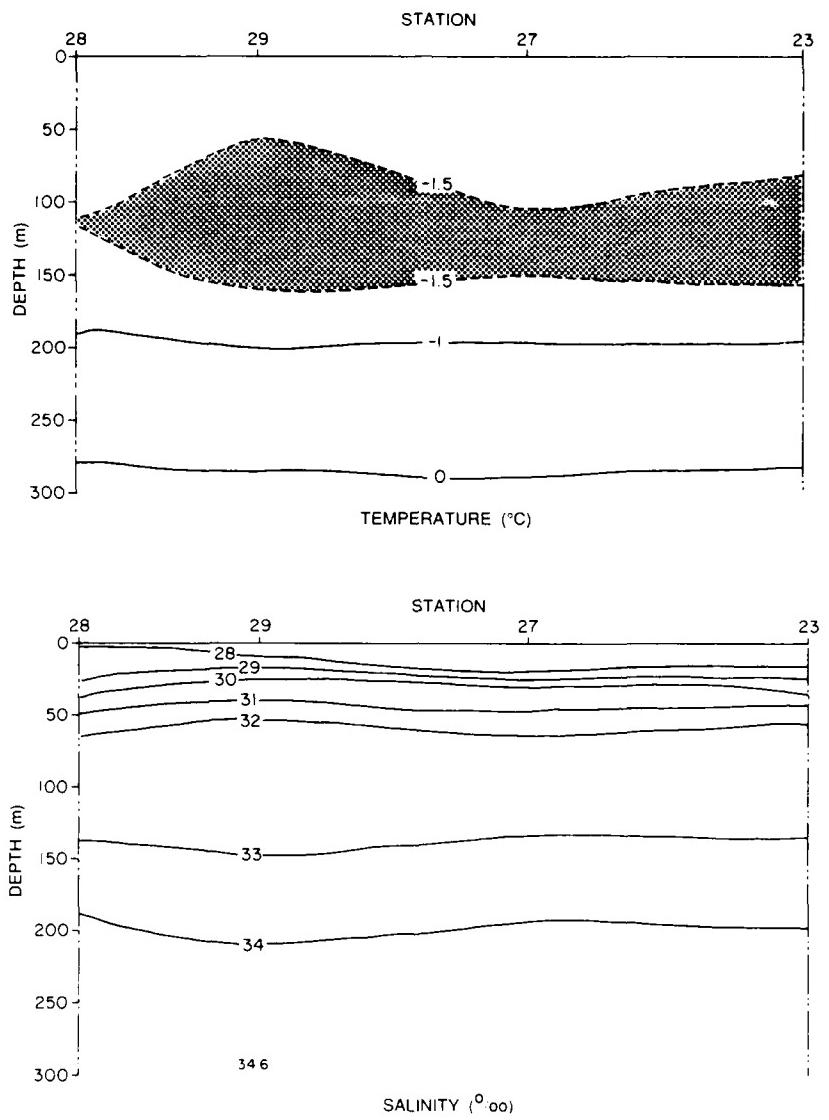


Figure 35. Line D cross sections showing temperature and salinity.

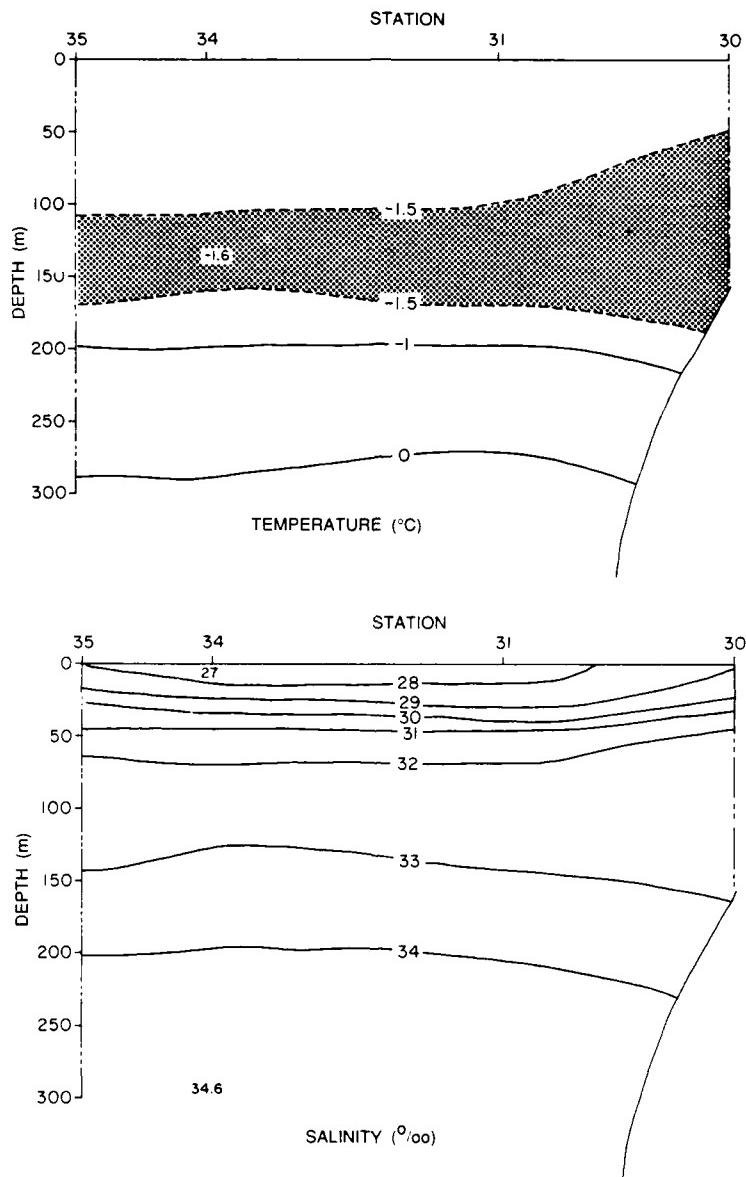


Figure 36. Line E cross sections showing temperature and salinity.

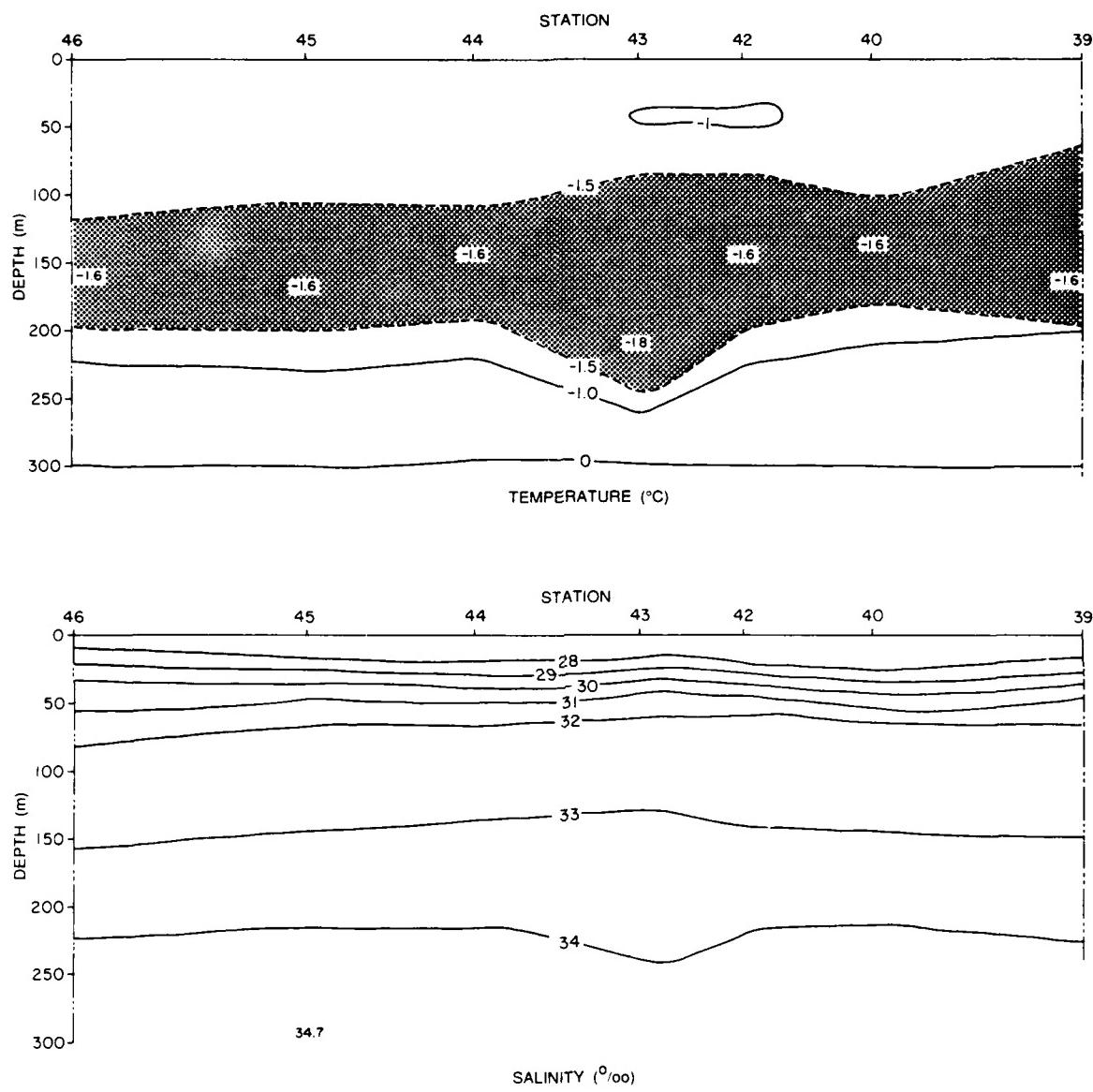
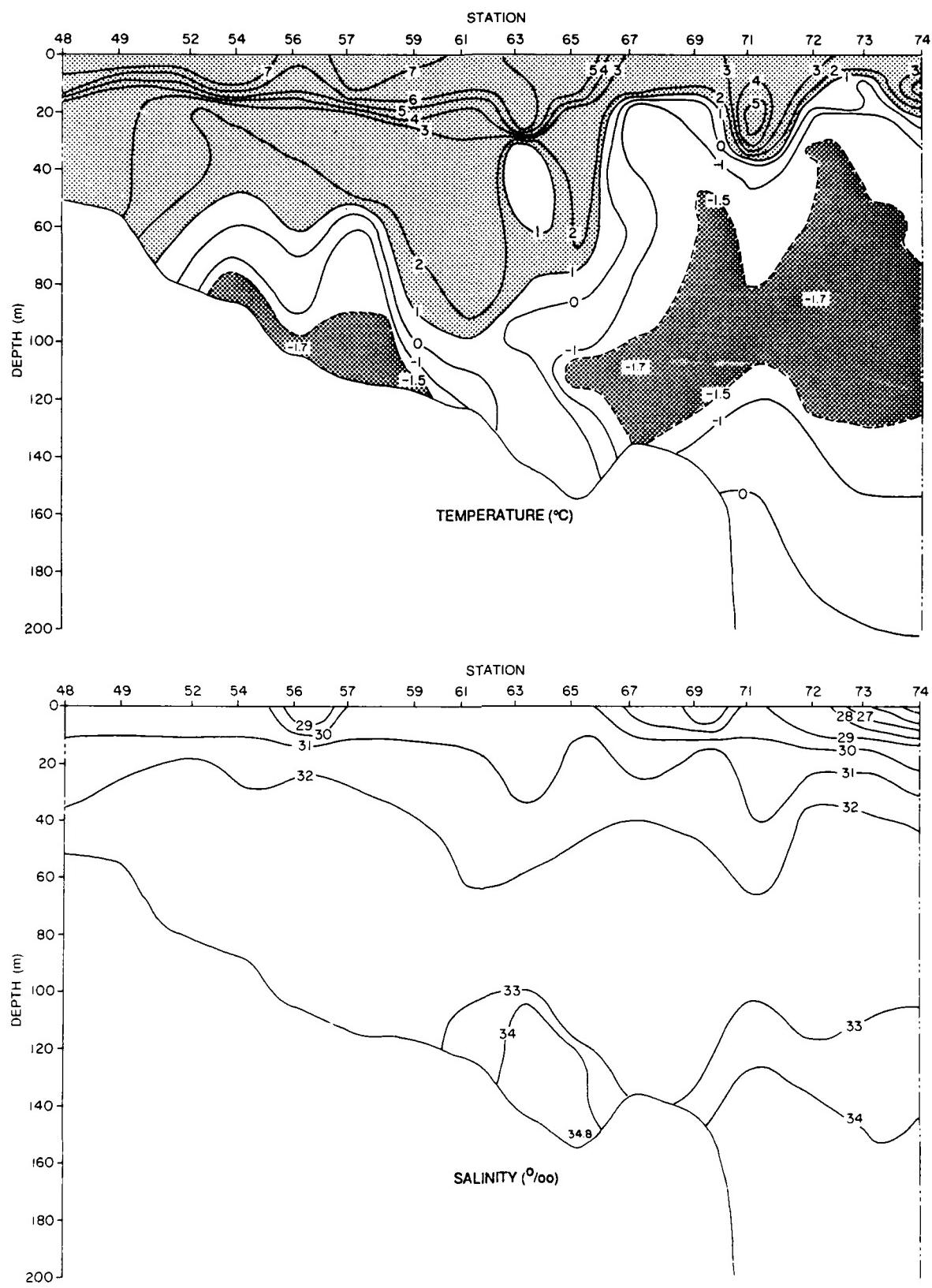
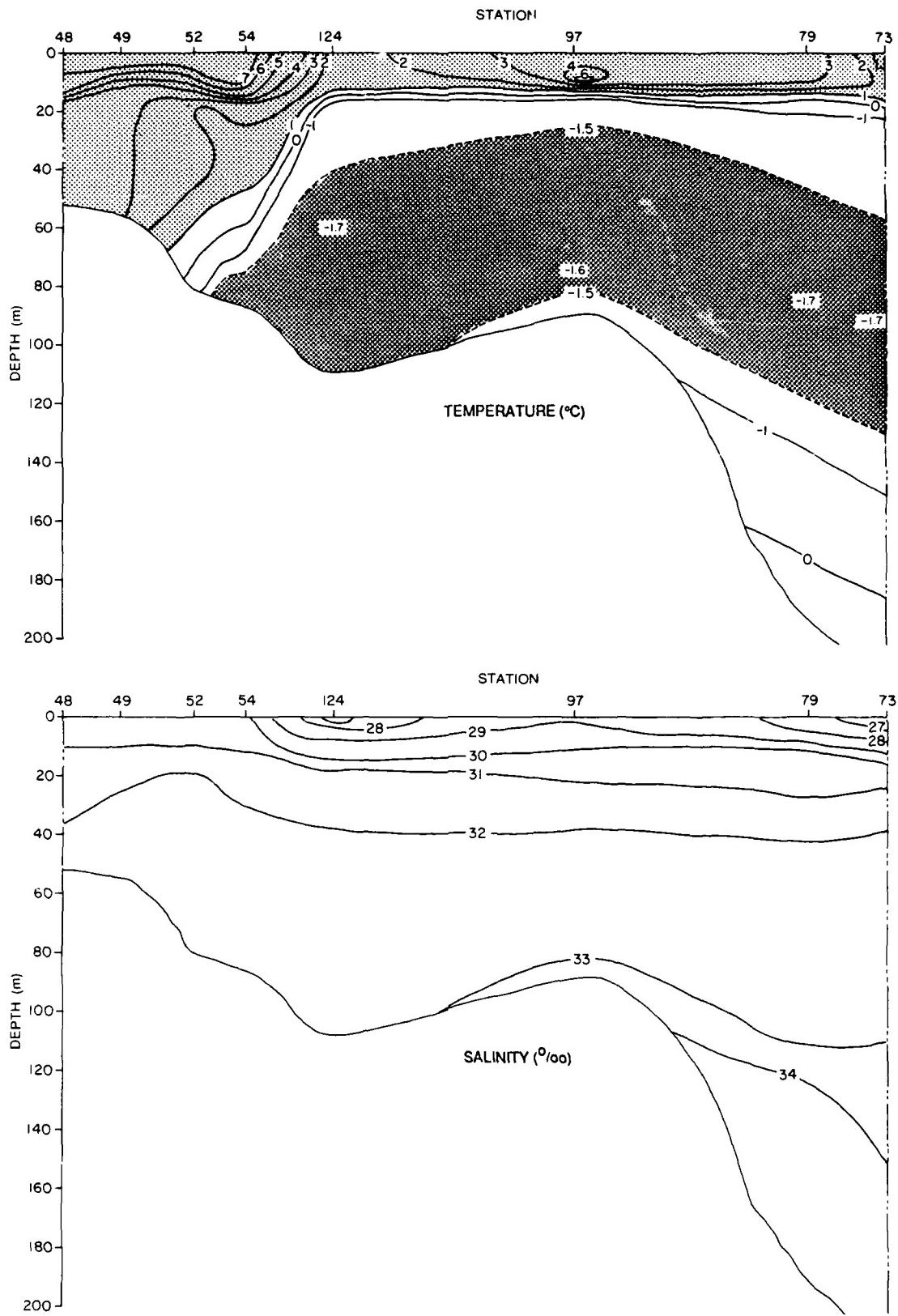


Figure 37. Line F cross sections showing temperature and salinity.



*Figure 38. Line G cross sections showing temperature and salinity.*



*Figure 39. Line G' cross sections showing temperature and salinity.*

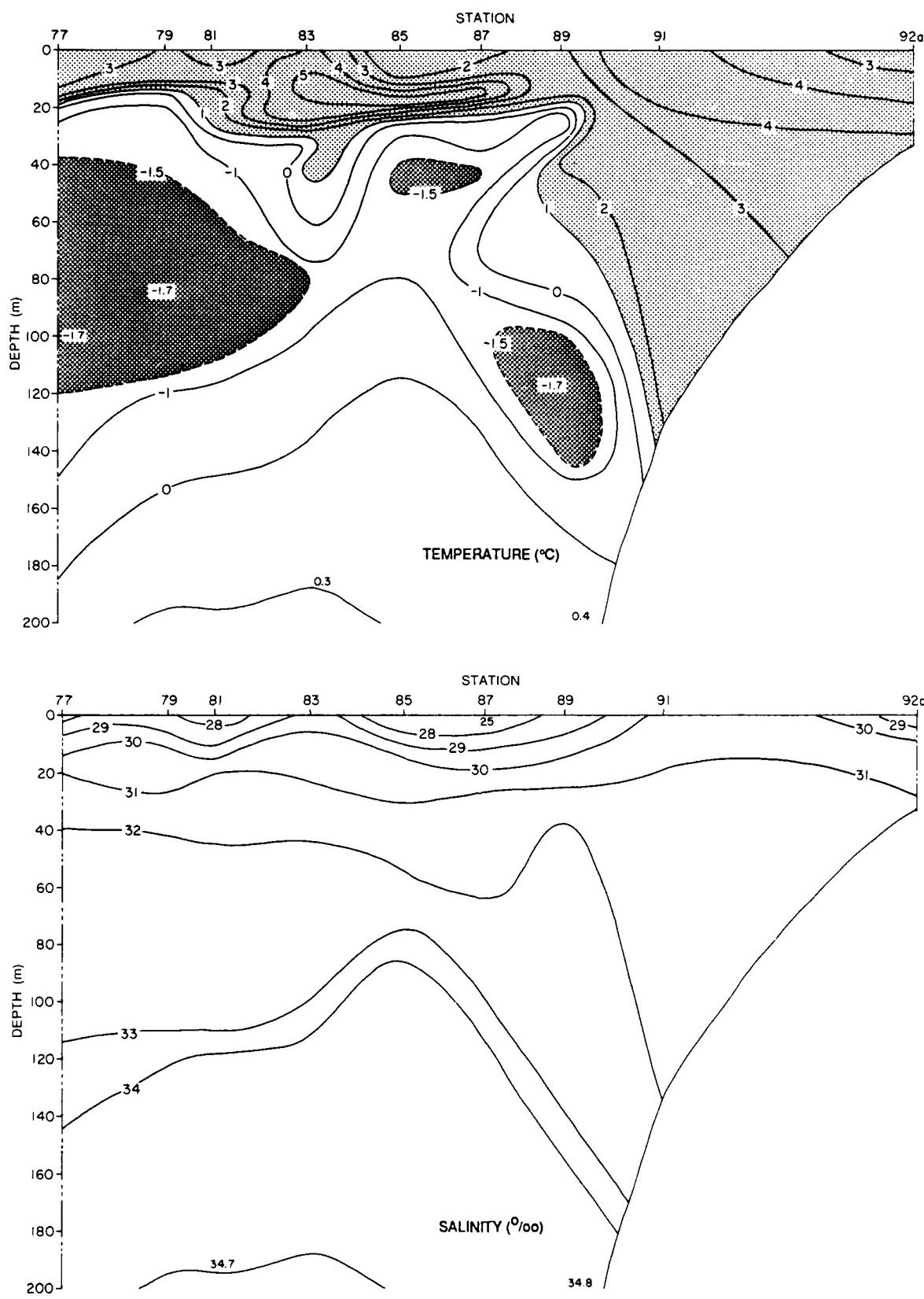


Figure 40. Line H cross sections showing temperature and salinity.

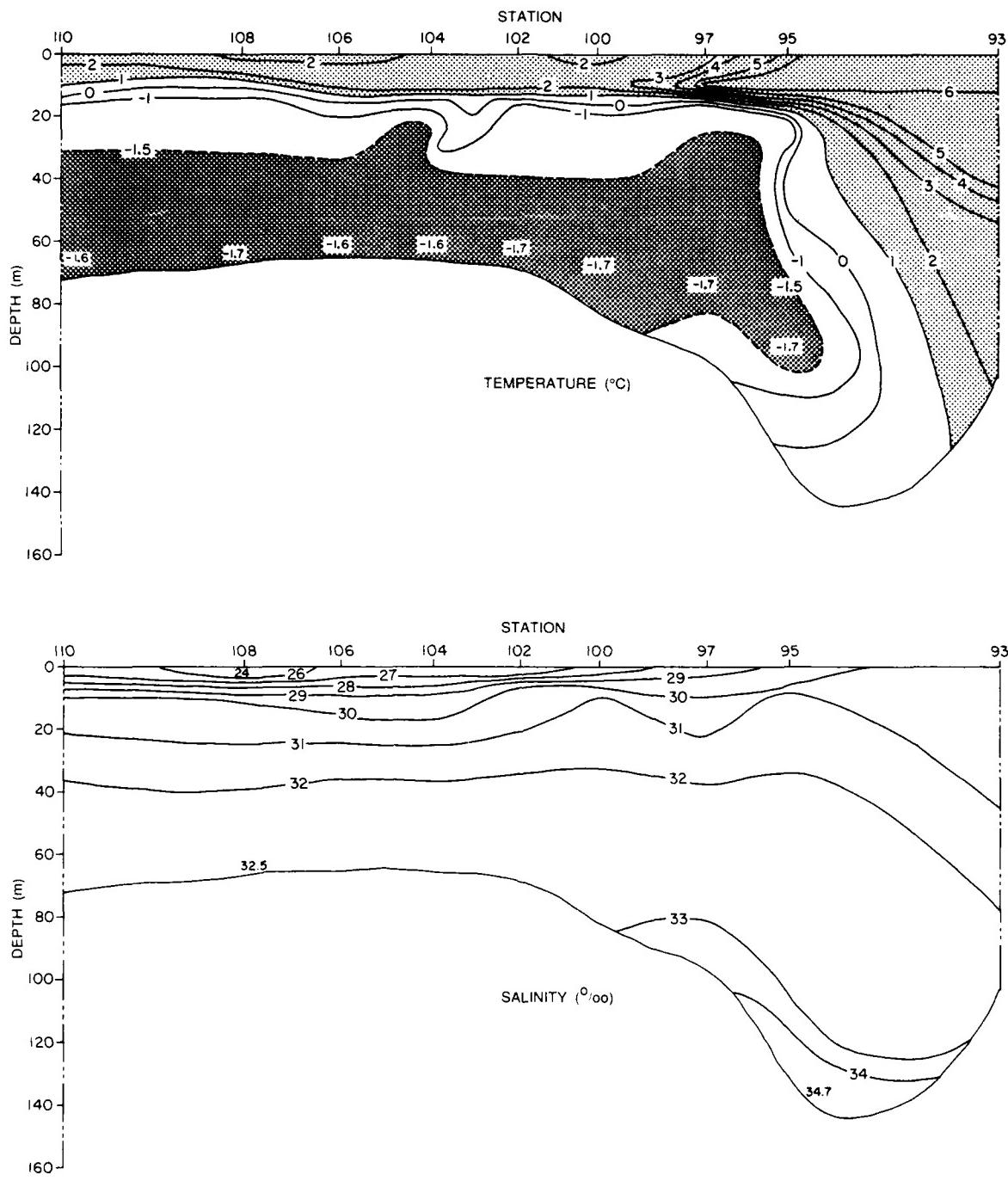


Figure 41. Line I cross sections showing temperature and salinity.

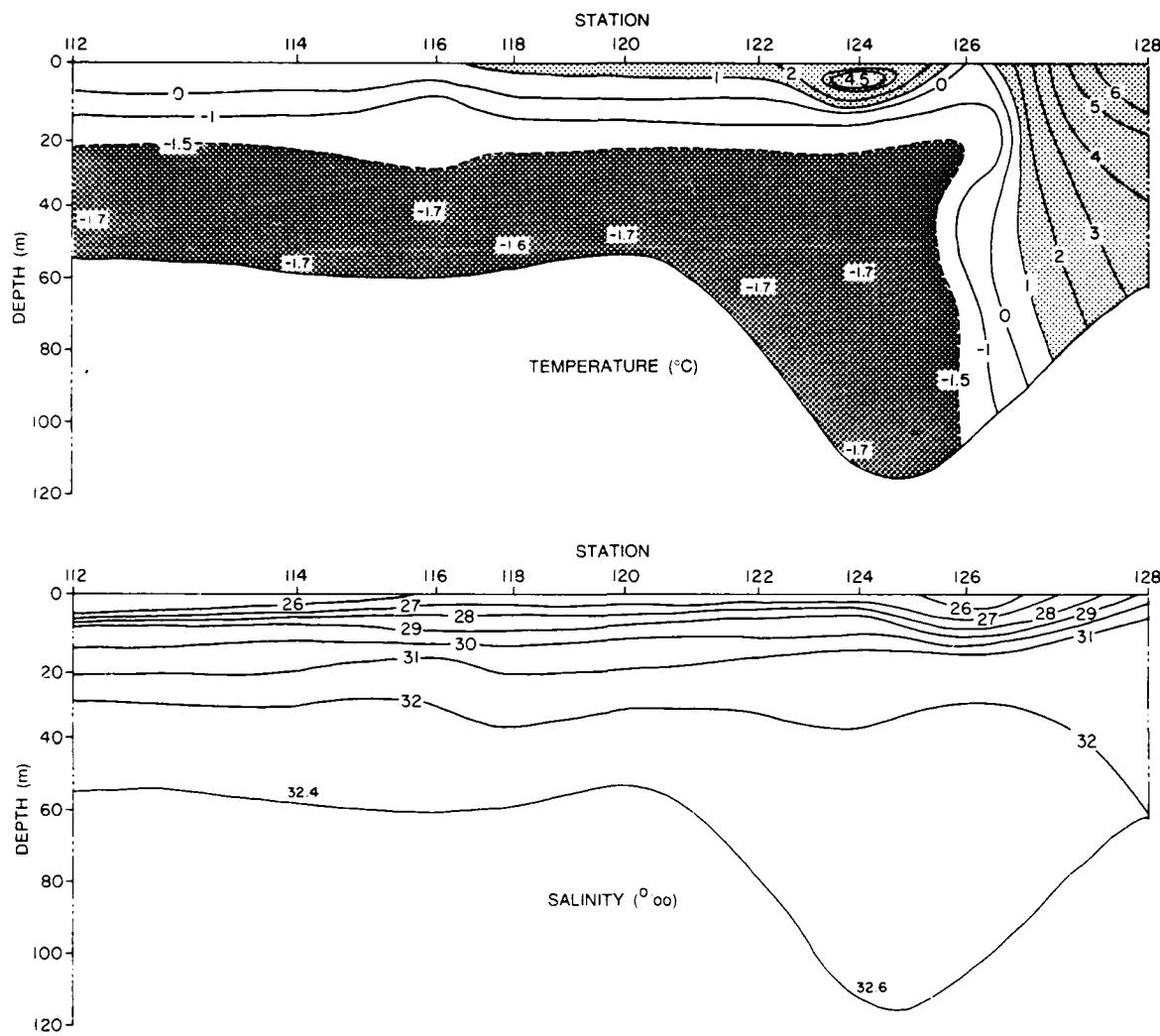
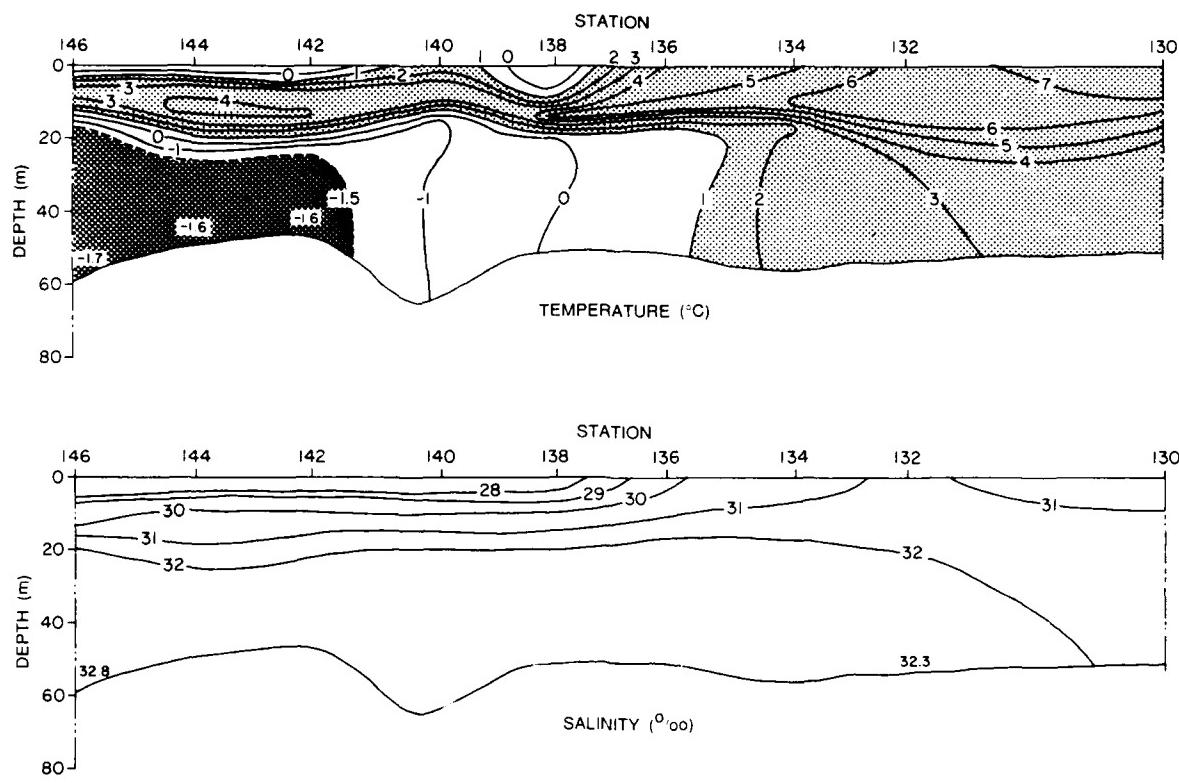
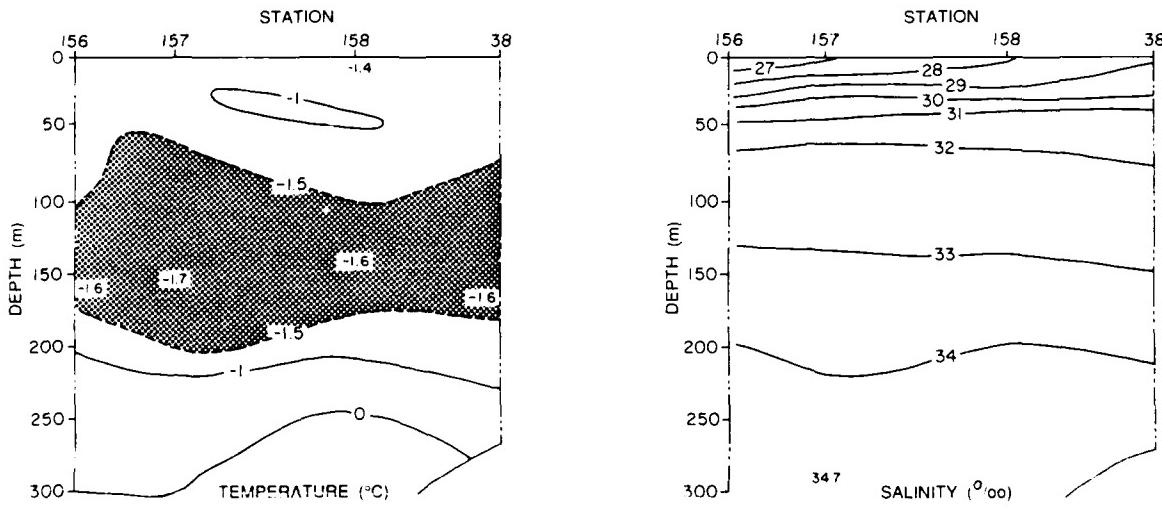


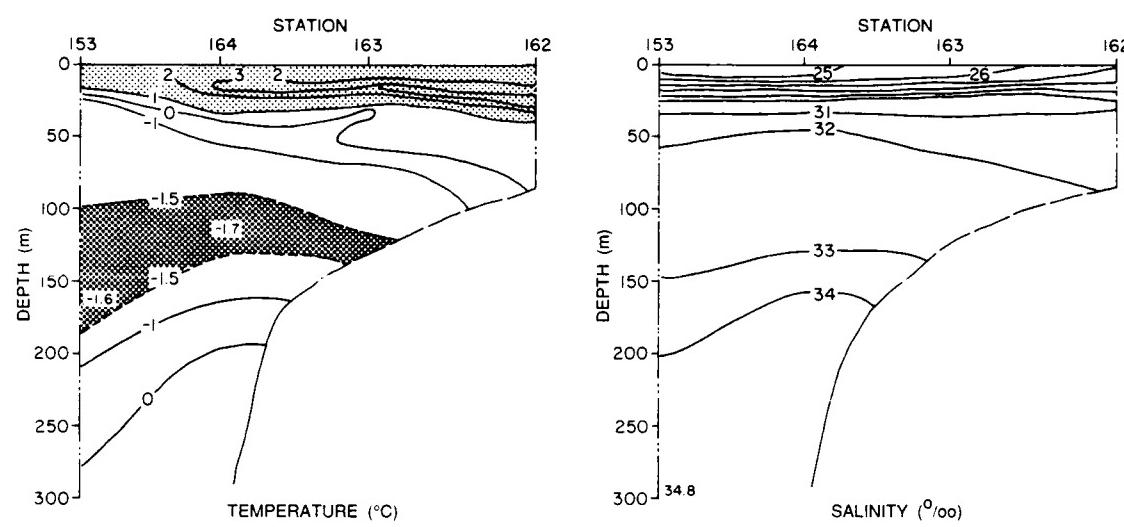
Figure 42. Line J cross sections showing temperature and salinity.



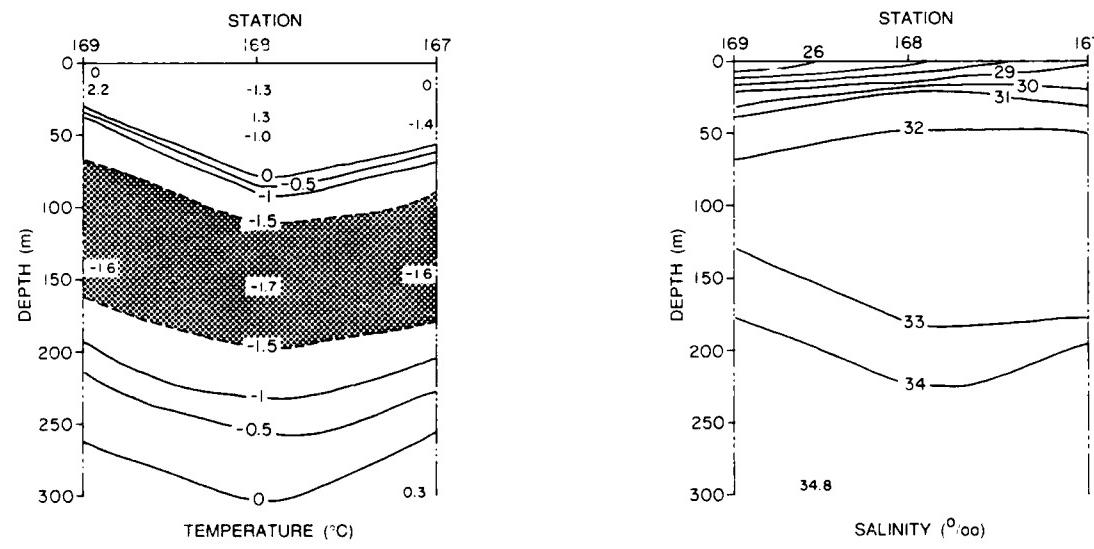
*Figure 43. Line K cross sections showing temperature and salinity.*



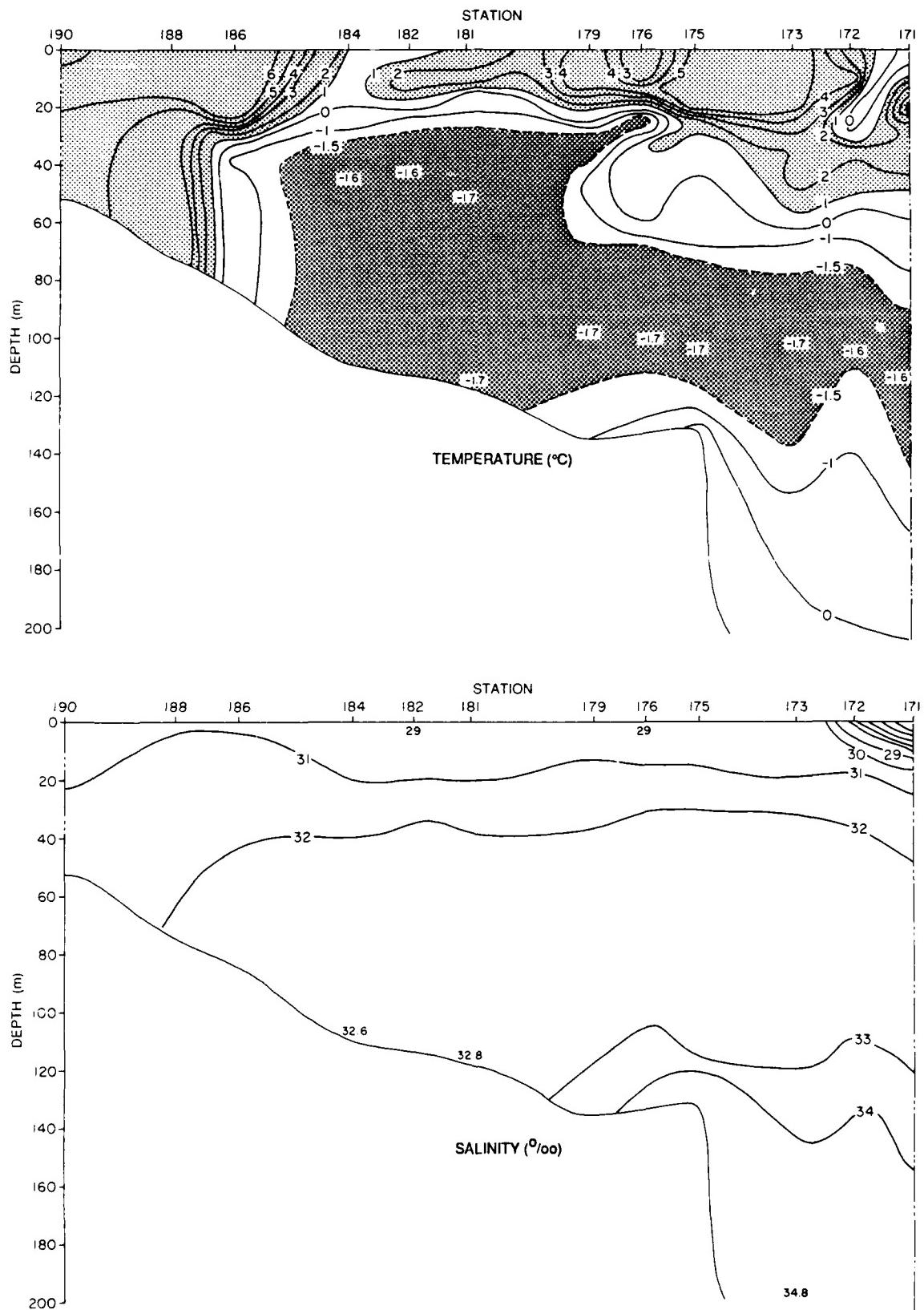
*Figure 44. Line L cross sections showing temperature and salinity.*



*Figure 45. Line M cross sections showing temperature and salinity.*



*Figure 46. Line N cross sections showing temperature and salinity.*



*Figure 47. Line O cross sections showing temperature and salinity.*

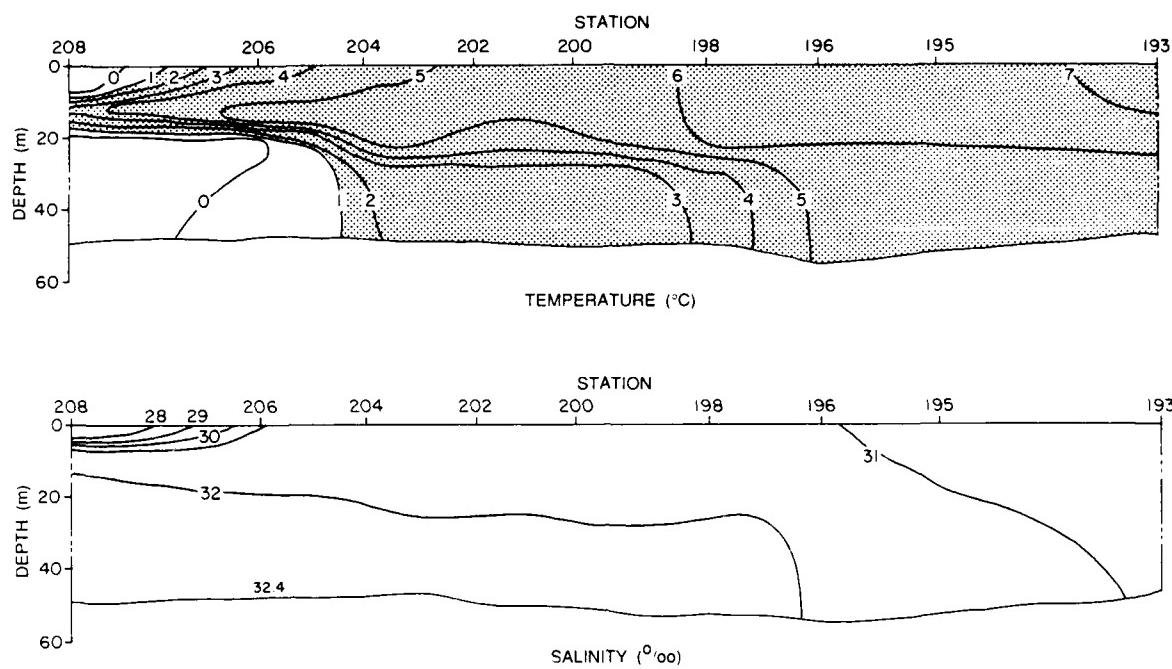


Figure 48. Line P cross sections showing temperature and salinity.

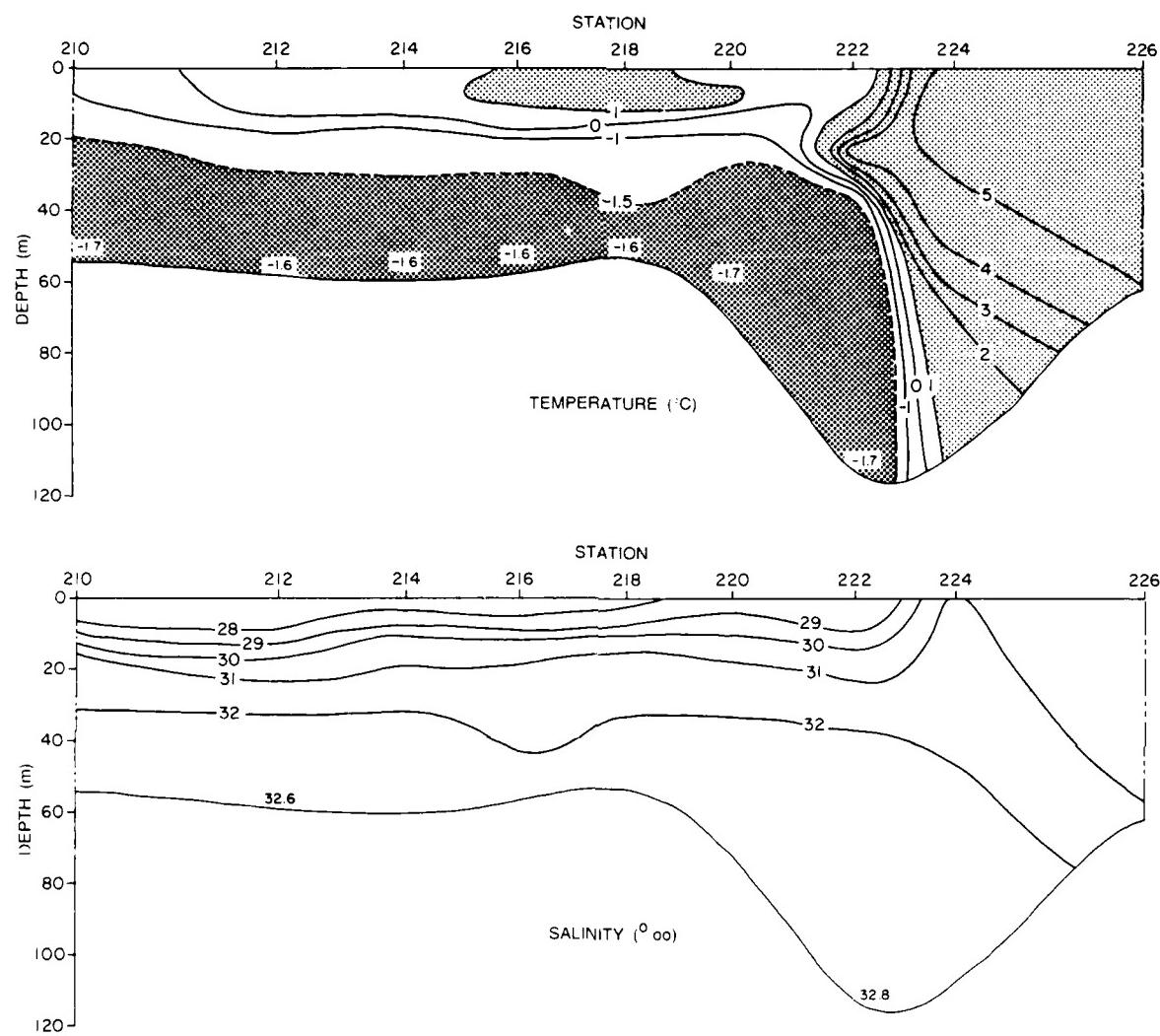


Figure 49. Line Q cross sections showing temperature and salinity.

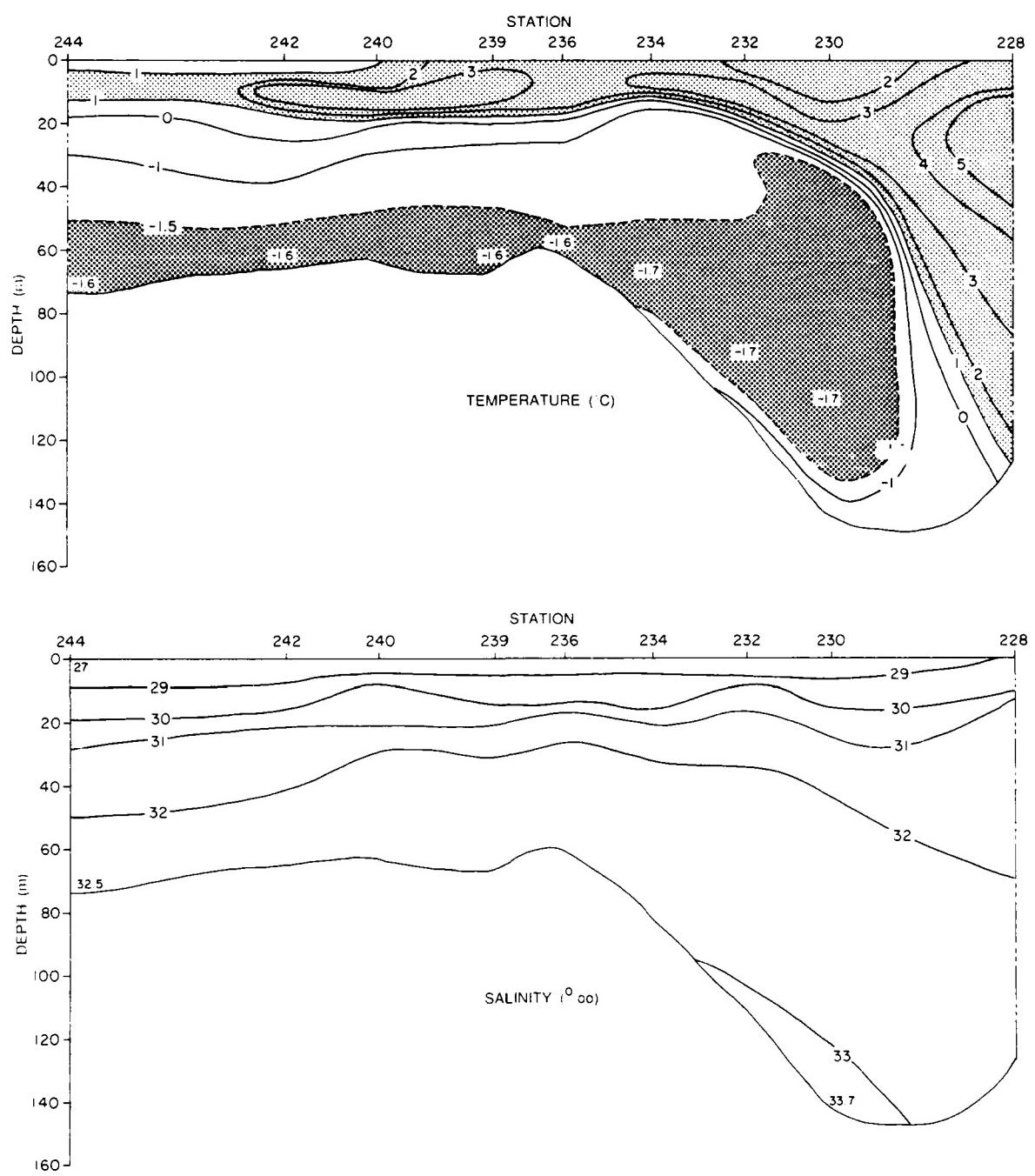


Figure 50. Line R cross sections showing temperature and salinity.

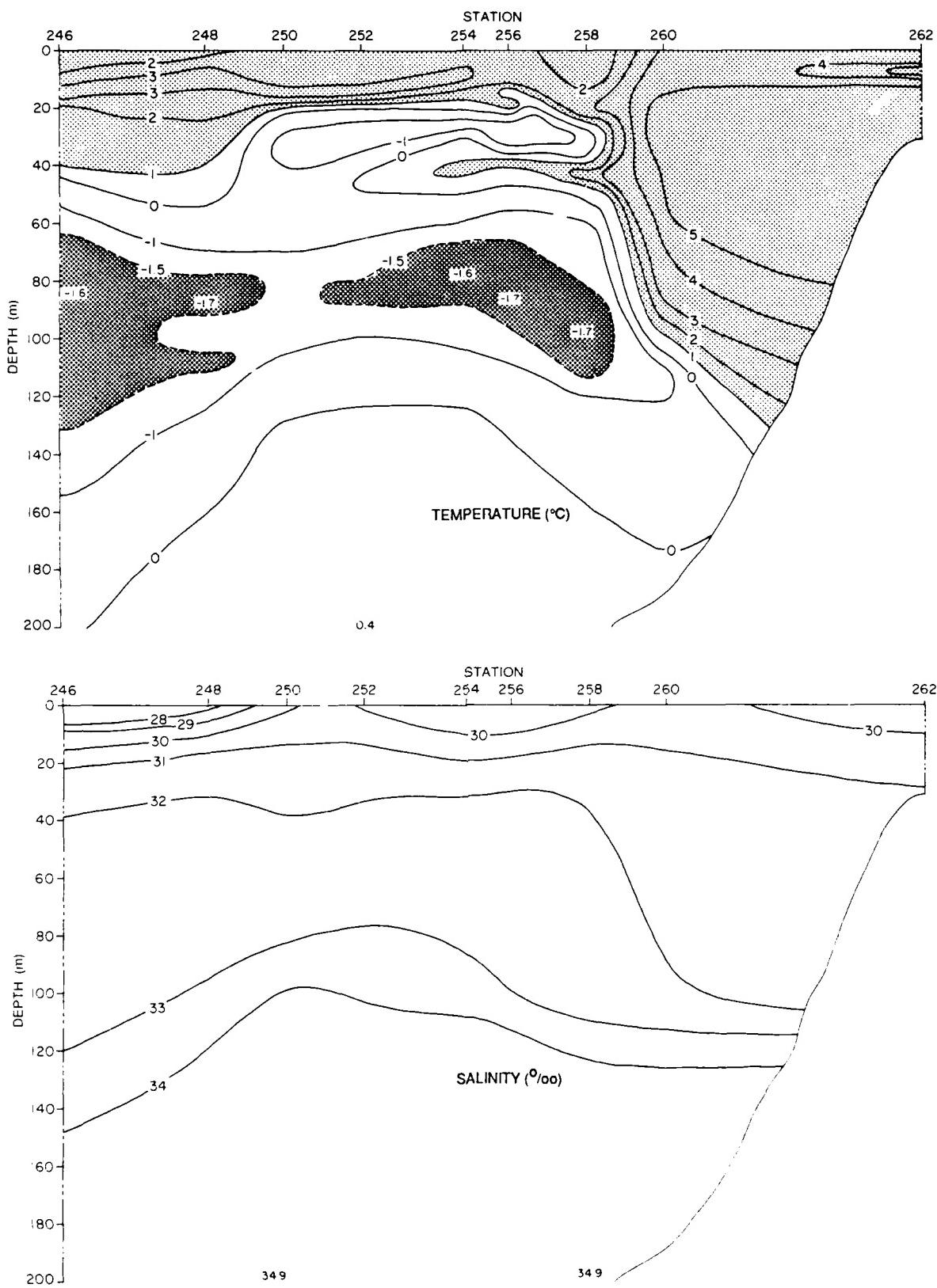
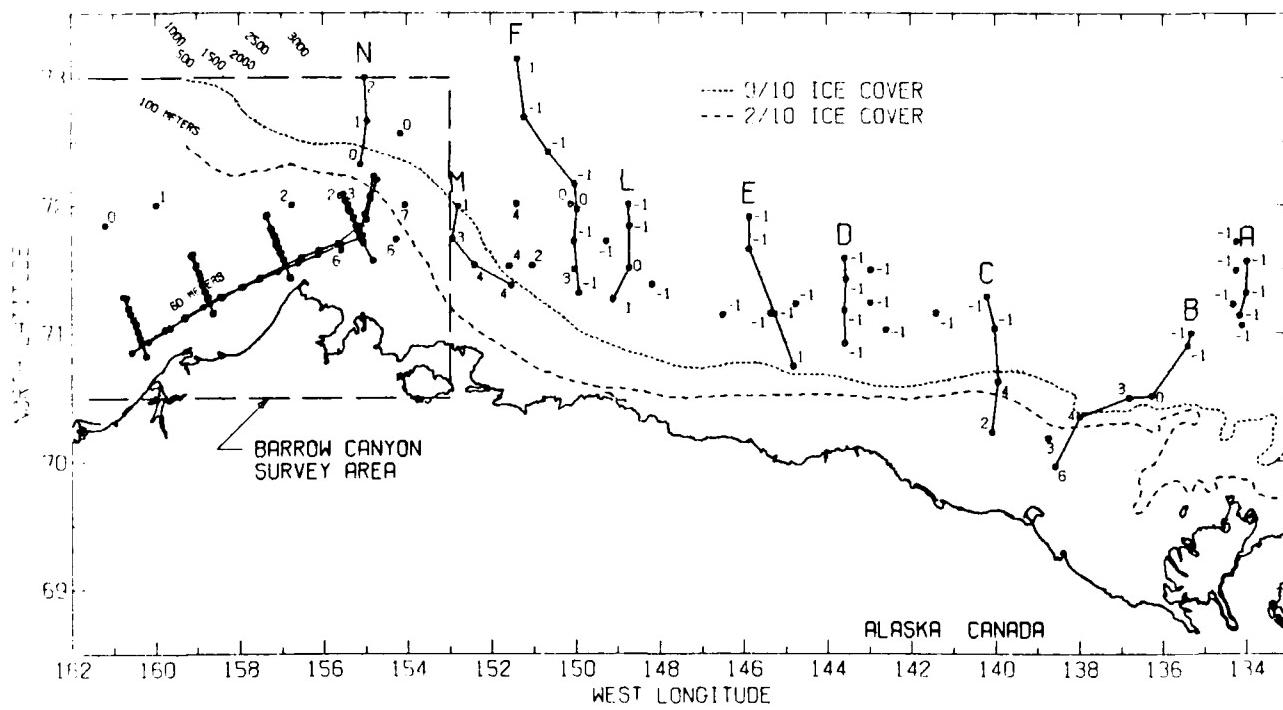


Figure 51. Line S cross sections showing temperature and salinity.

The maximum temperature at each station is shown in Figures 52 and 53. The minimum temperature at each station is shown in Figures 54 and 55.

Stations with a maximum temperature exceeding  $1^{\circ}\text{C}$  are shown in Figure 56. Expanded views of stations with water  $>1^{\circ}\text{C}$  in the two Barrow Canyon surveys are shown in Figure 57. Also plotted on each figure is the ice cover near the time of the CTD measurements. The warm water plot can be extended shoreward by using the satellite image for 25 August (Figure 10); of course, this is surface temperature only, as indicated by IR emission. Based on the satellite data, the warm intrusion appears to progress around Pt. Barrow and follow the coast to Cape Halkett.

The extent of the cold bottom layer ( $<-1.5^{\circ}\text{C}$ ) is shown in Figures 58 and 59. Nearly all stations have such cold water. In Section X, we will repeat these figures for lower thresholds.



*Figure 52. Maximum temperature ( $^{\circ}\text{C}$ ) for each CTD station. For the Barrow Canyon area, see Figure 53.*

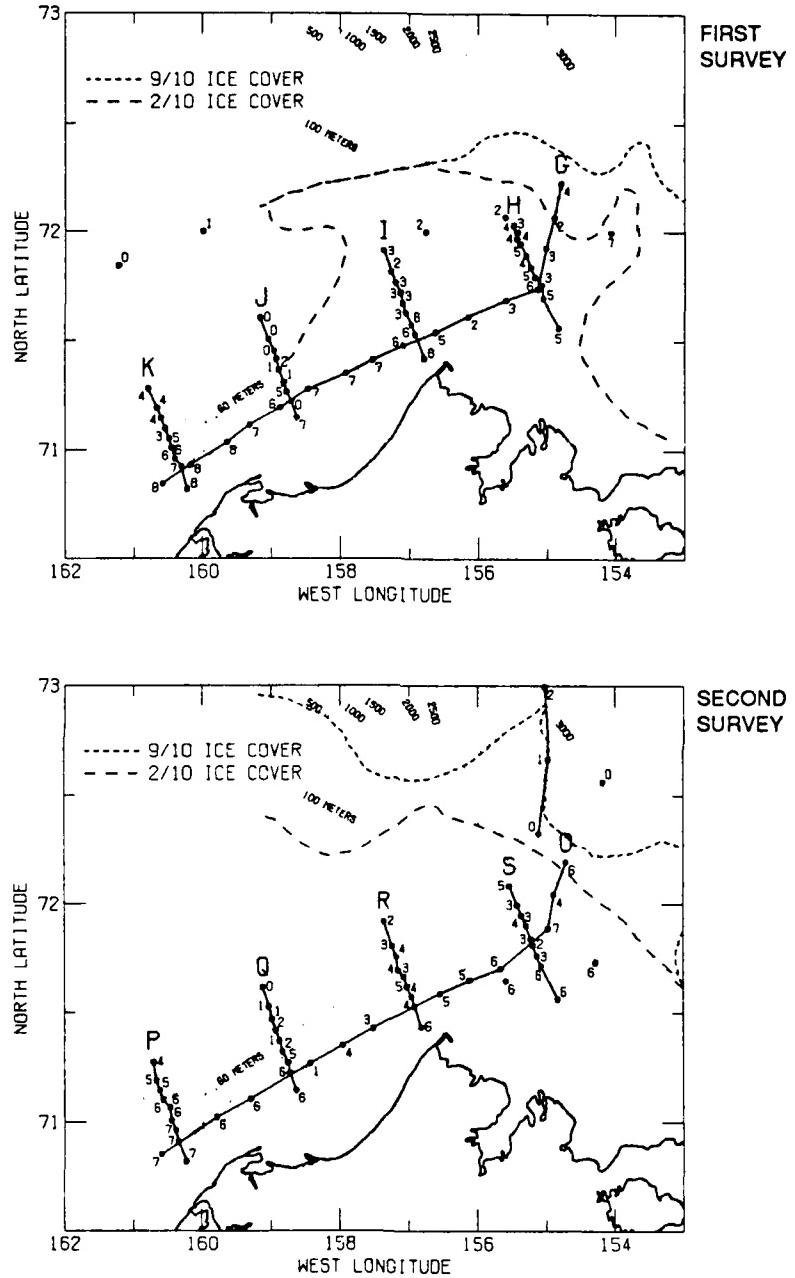
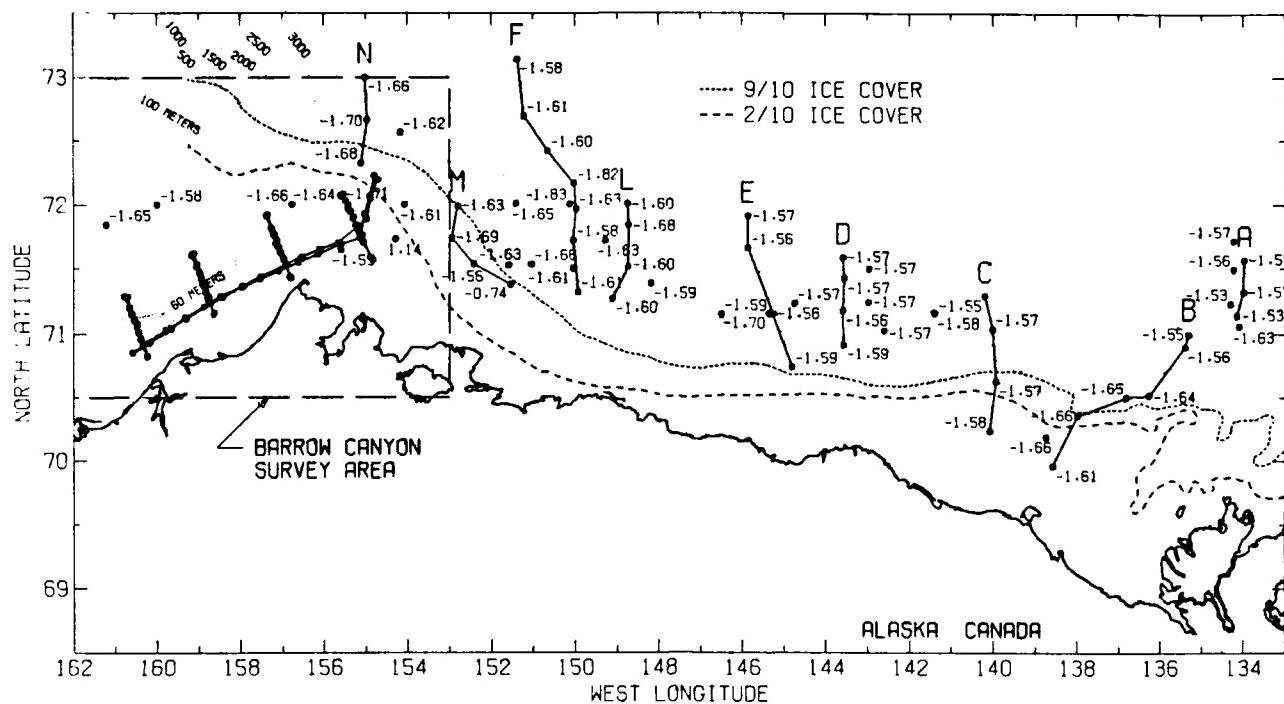


Figure 53. Maximum temperature ( $^{\circ}\text{C}$ ) for each CTD station in the two Barrow Canyon surveys.



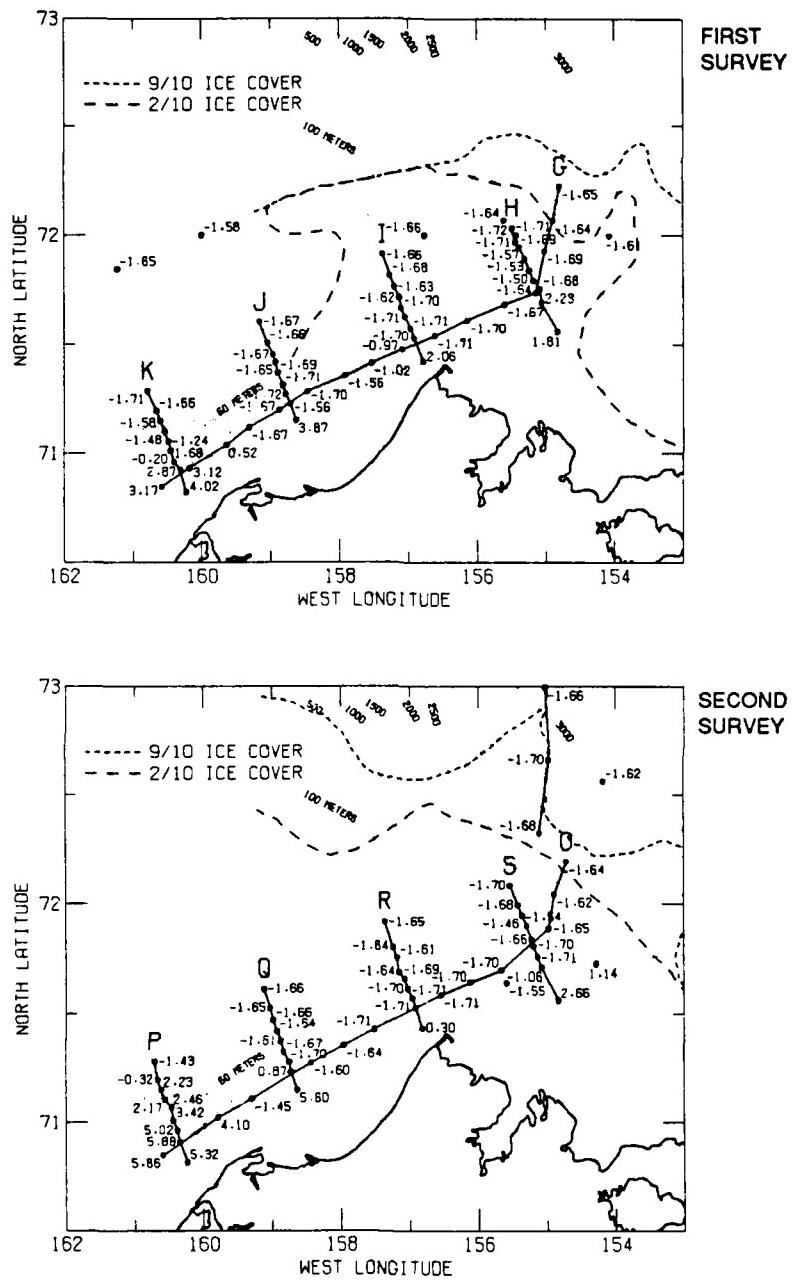


Figure 55. Minimum temperature ( $^{\circ}\text{C}$ ) for each CTD station in the two Barrow Canyon surveys.

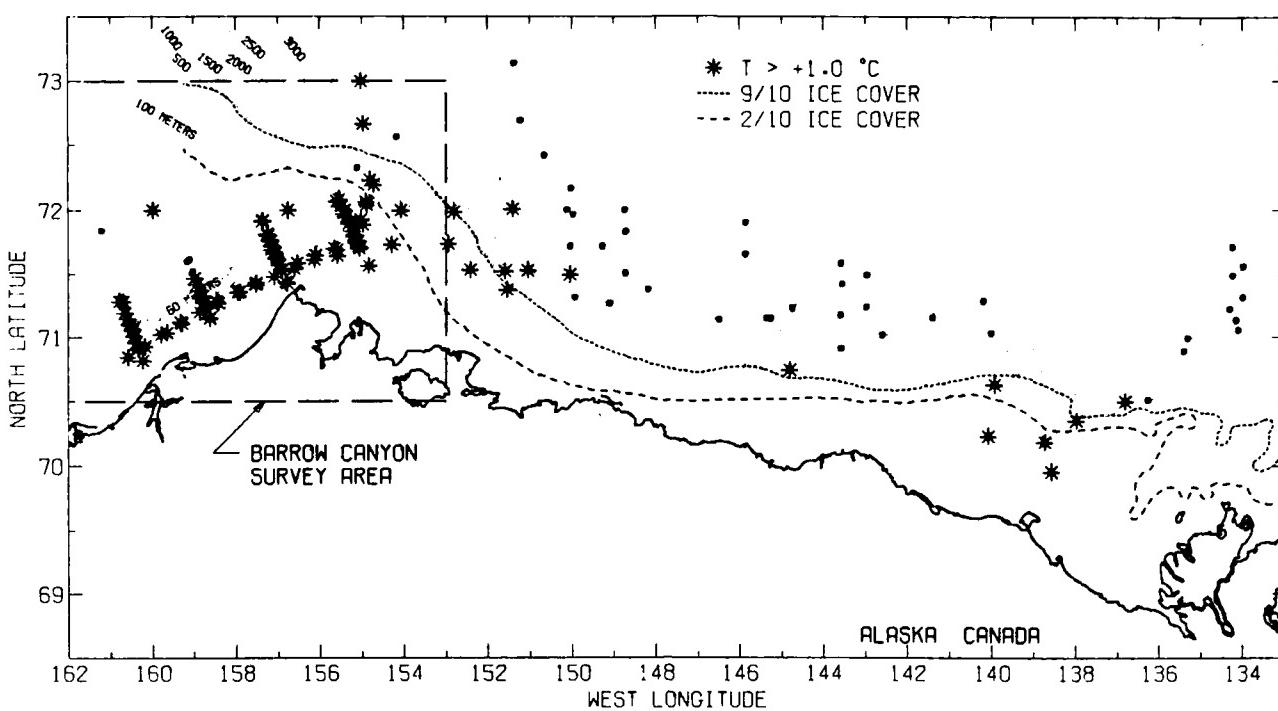


Figure 56. Stations with maximum temperature exceeding  $1^{\circ}\text{C}$ .

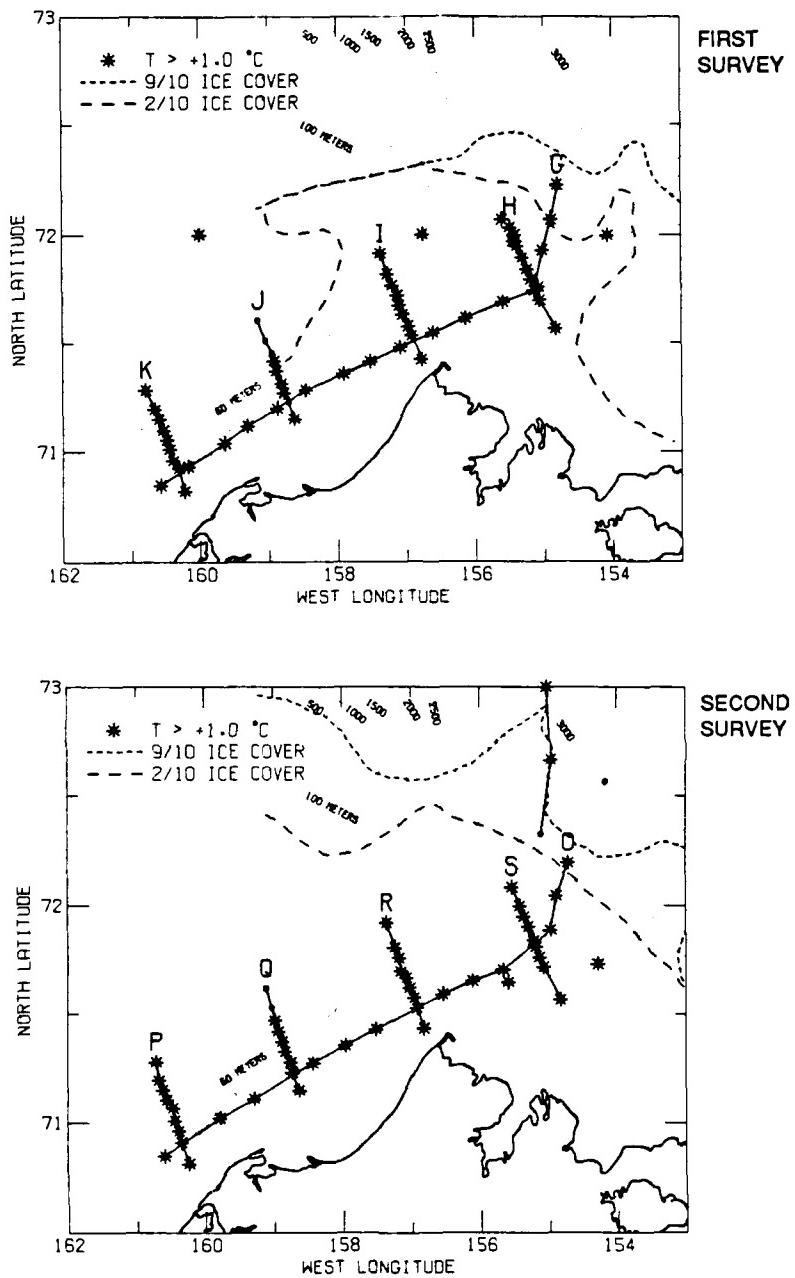


Figure 57. Stations with maximum temperature exceeding  $1^{\circ}\text{C}$  in the two Barrow Canyon surveys.

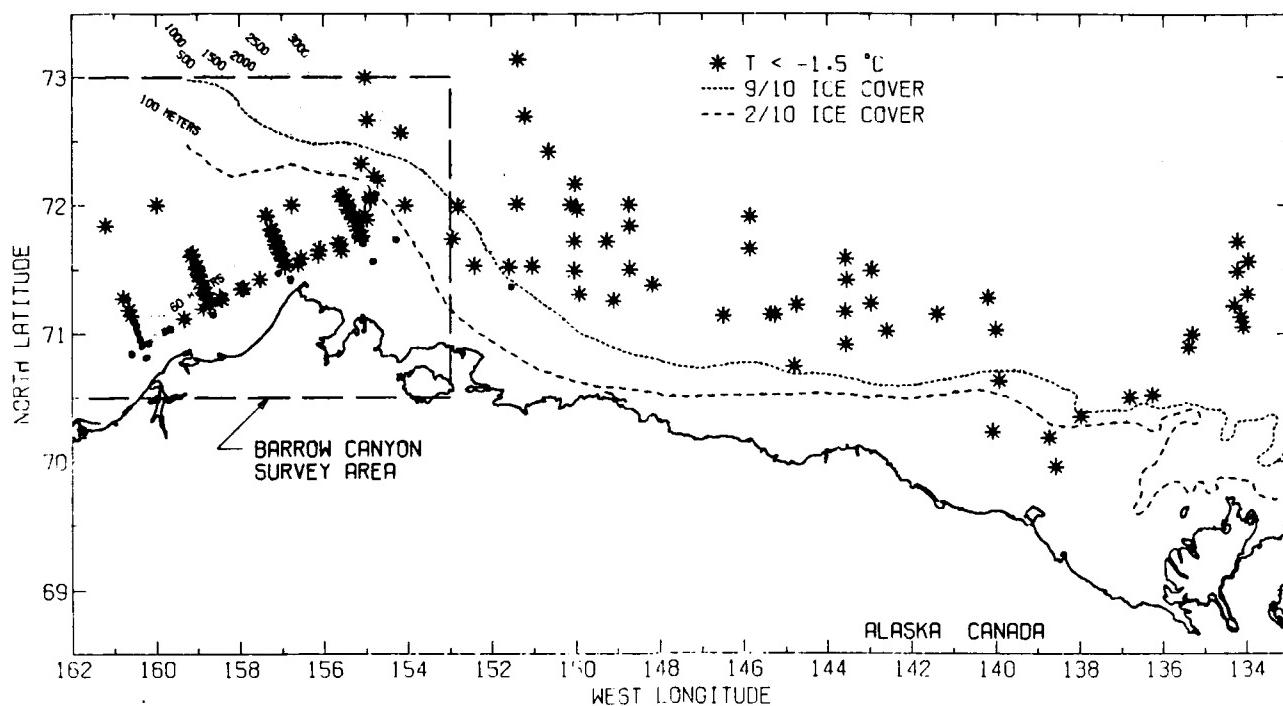


Figure 58. Stations with minimum temperature  $<-1.5^{\circ}\text{C}$ .

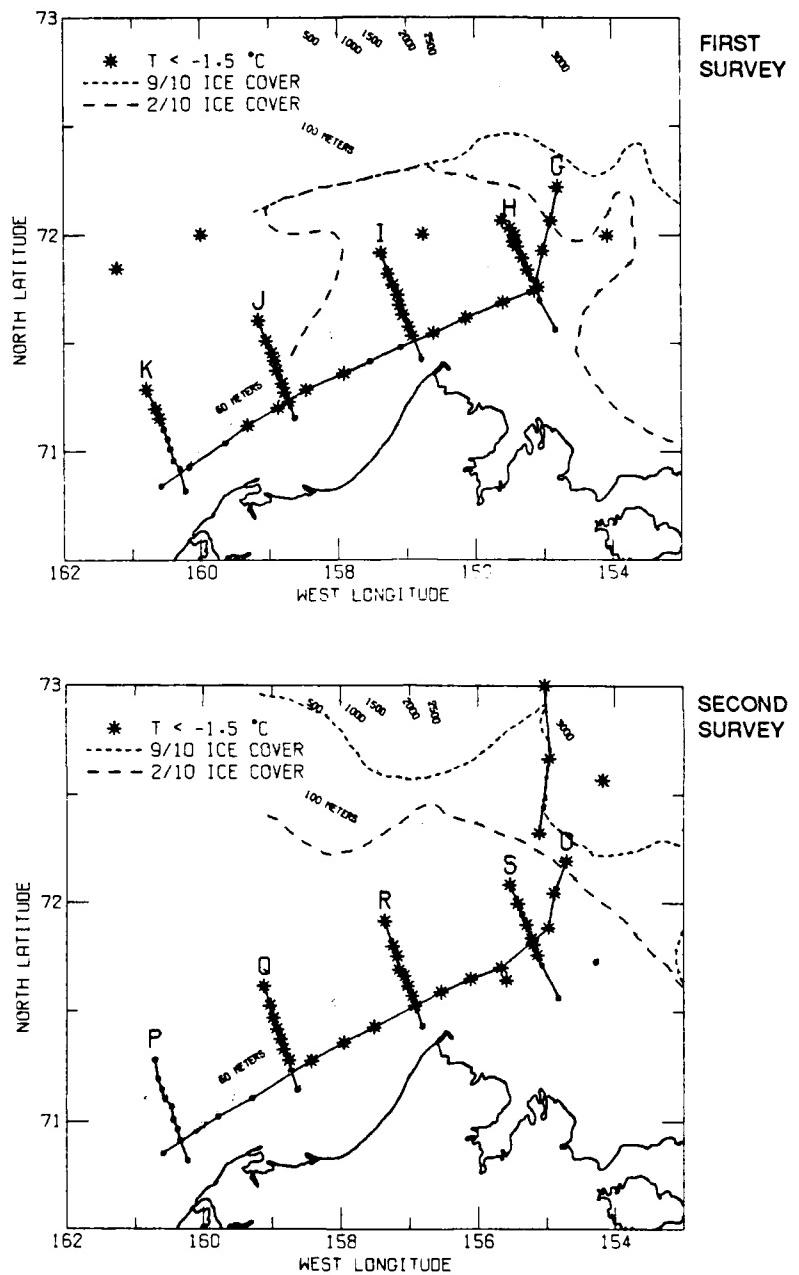


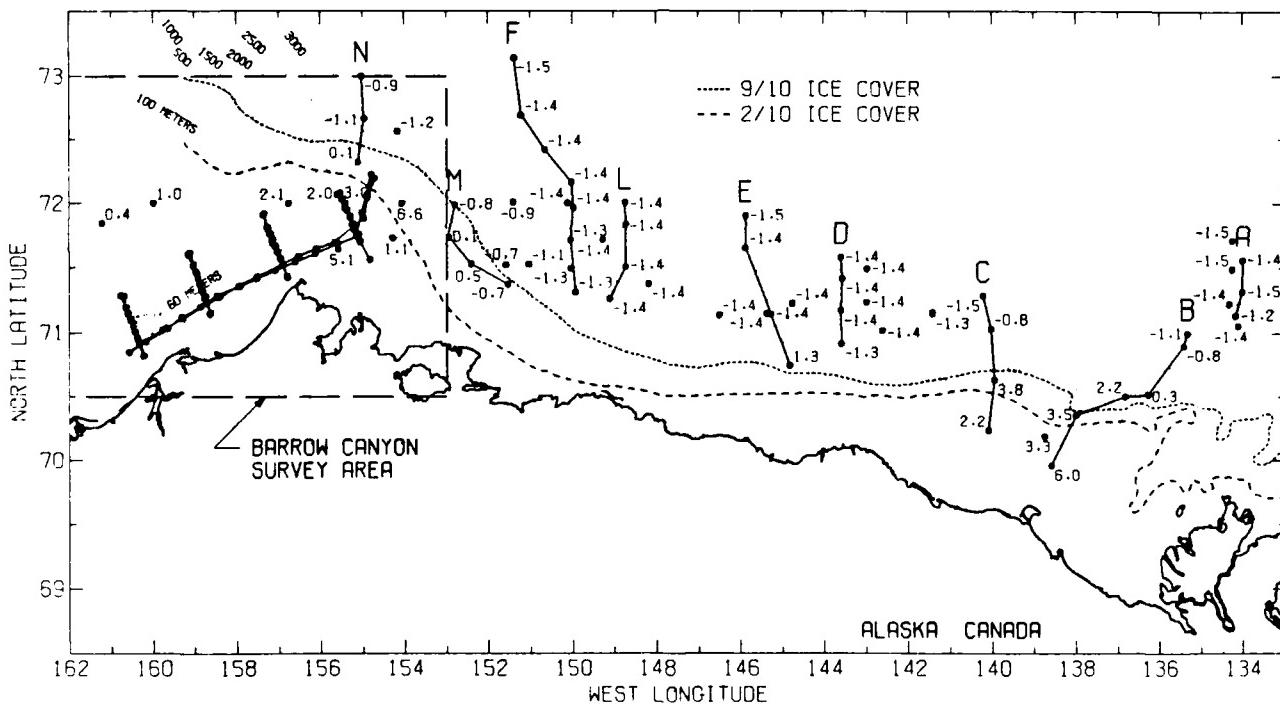
Figure 59. Stations with minimum temperature  $<-1.5^{\circ}\text{C}$  in the two Barrow Canyon surveys.

## IX. SURFACE CONDITIONS

The changes in water properties at the surface are a good indicator of water movements if the depth of the surface layer is known. Surface layer conditions can indicate river runoff even if there has been considerable mixing with the existing water.

### A. Surface Properties, 1985

The surface temperature readings recorded by the profilers may be inaccurate because of the disturbance created when the ship comes to a stop, although careful ship handling that allows some forward motion at the last minute can result in an undisturbed surface layer. Ignoring fluctuations, we have plotted the first steady surface temperatures for all stations in Figures 60 and 61. The warm coastal current and the Mackenzie River runoff are indicated by temperatures  $>1^{\circ}\text{C}$ .



*Figure 60. Surface layer temperatures ( $^{\circ}\text{C}$ ) from the CTD profiles. For the Barrow Canyon area, see Figure 61.*

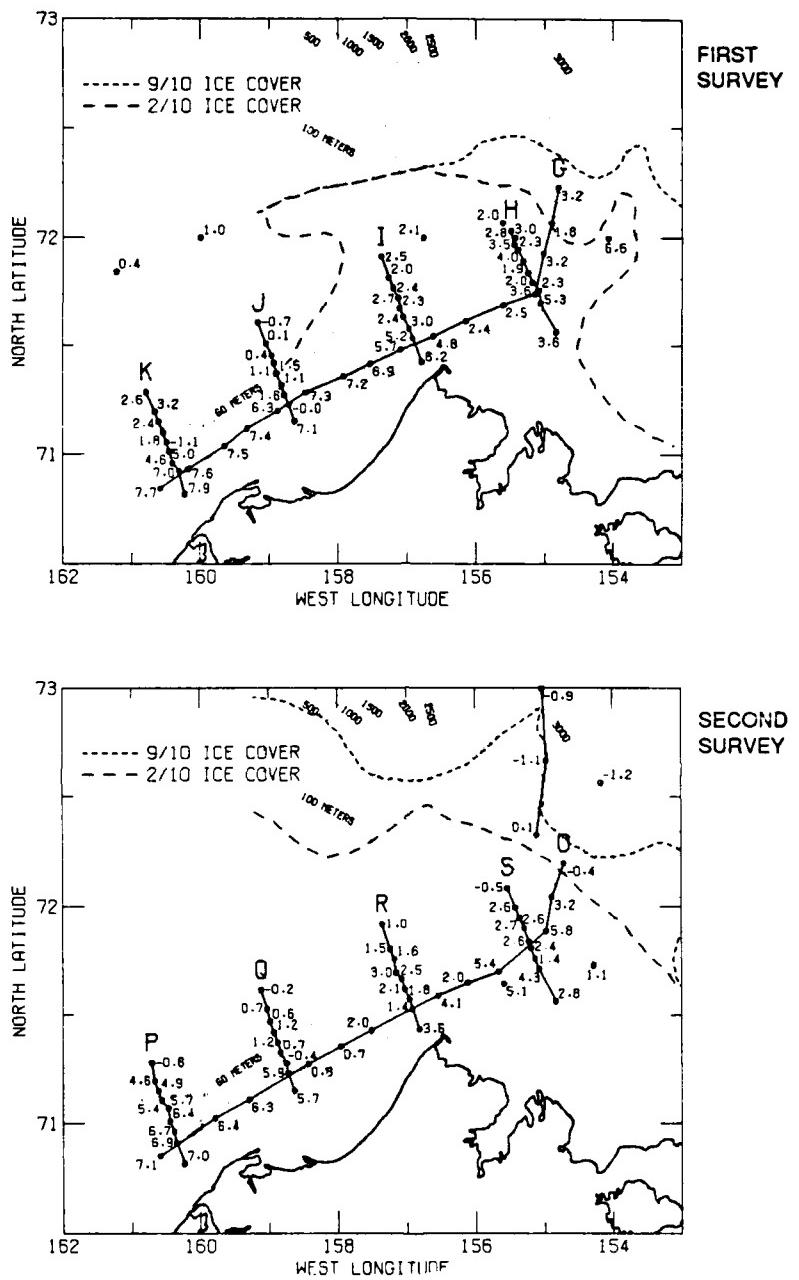
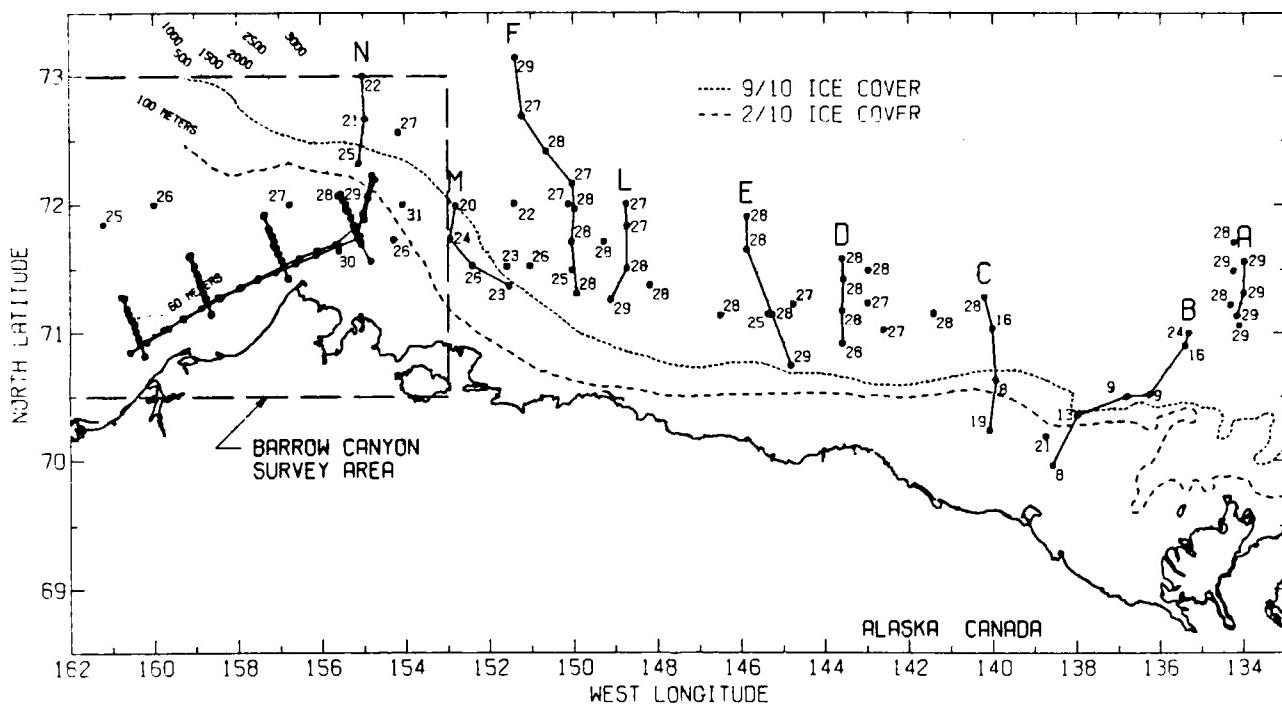


Figure 61. Surface layer temperatures ( $^{\circ}\text{C}$ ) from the CTD profiles for the two Barrow Canyon surveys.

The surface salinity readings may show a thin layer of low salinity due to melting ice. We consider here only surface layers at least 3 m thick, since this amount of low-salinity water should indicate river runoff. Figure 62 indicates the surface salinity at each station. The low salinities in the eastern portion show the effect of the Mackenzie River. The low values near section M may indicate that other rivers have contributed along the coastline. Figure 63 shows surface salinities for the Barrow Canyon area. The coastal current, which crowds along the coast, has a higher salinity, and this salinity increases for the second survey.



*Figure 62. Surface layer salinities (‰) from the CTD profiles. For the Barrow Canyon area, see Figure 63.*

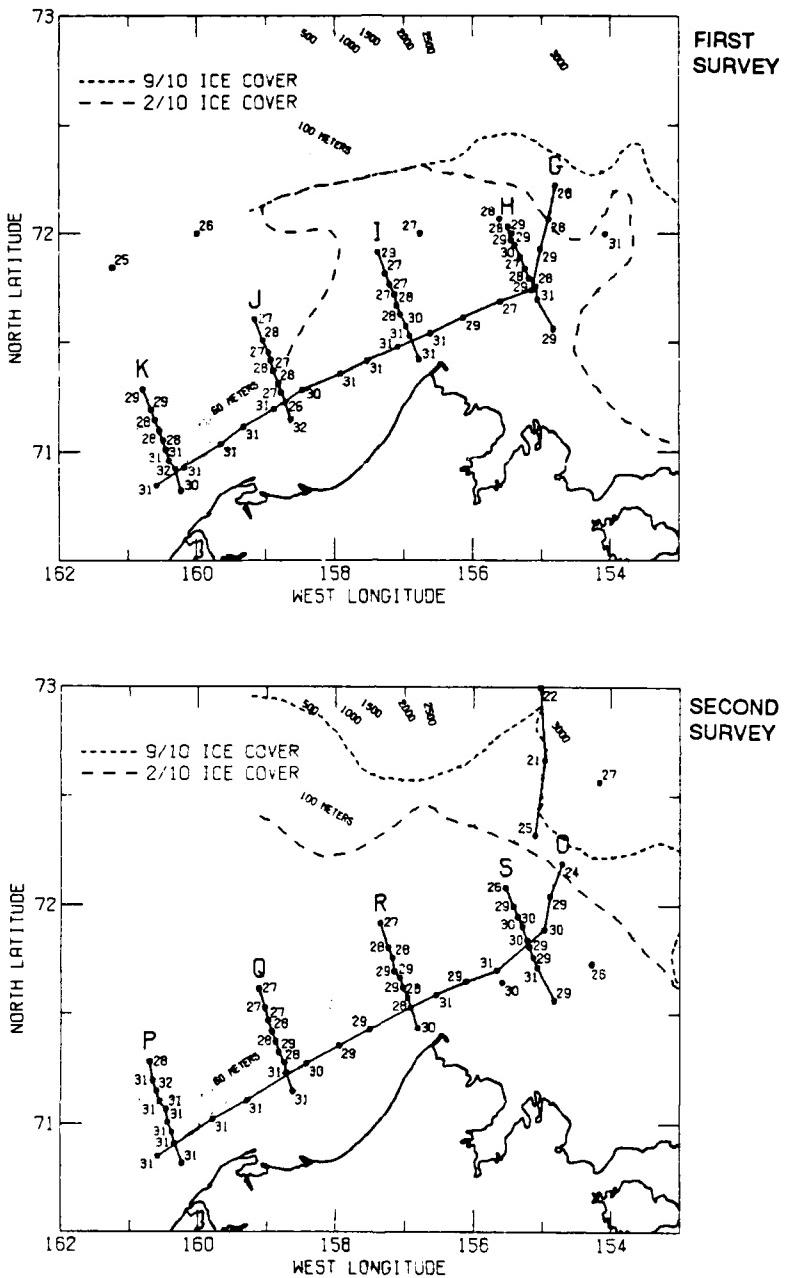


Figure 63. Surface layer salinities ( $\text{\textperthousand}$ ) from the CTD profiles for the two Barrow Canyon surveys.

## B. Other Cruises in Past Years

Data from other cruises were examined, and the surface temperatures and salinities extracted and plotted for comparison with the 1985 data. Plots for the following cruises, by ship name, appear in Appendix C. There are large differences from year to year. Some of this variation may be due to the method of measuring surface temperature and salinity.

Figure	Cruise	Year
C-1	<i>Burton Island</i>	1950
C-2	<i>Burton Island</i>	1951
C-3	<i>Atka</i>	1957
C-4	<i>Staten Island</i>	1959
C-5	<i>Glacier, Natchik</i>	1972 (S only)

## C. Satellite IR Patterns

A comparison of the surface temperatures obtained from the CTD profiles (Figures 60 and 61) with those interpreted from satellite IR measurements shows fair agreement. The IR results could represent a much thinner layer, but the agreement shown here indicates that there were no thin temperature layers.

The IR images in Figures 8–10 demonstrate the temperature pattern along the coast. The considerable amounts of warm water between Pt. Barrow and Cape Halkett appear to be related to the coastal current's deposit of warm water in a long plume past Pt. Barrow. The warm coastal water east of Barter Island appears to be related to the Mackenzie River outflow. The warm areas shown along the coast in the satellite images do not extend as far seaward as the closest CTD stations; therefore this warm water was not seen in the CTD profiles.

## X. ANALYSIS OF WATER EXCHANGE

Several means are at our disposal for studying and understanding the water movements prior to and during the survey. Previous oceanographic studies<sup>5,17</sup> of the Barrow Canyon area are helpful in identifying and tracing water types. Some of the changes taking place in the Barrow Canyon area can be analyzed by comparing the two cross sections taken 10 days apart. Interpretation of the surface layers observed by the CTD stations can be augmented by the IR satellite images. The Mackenzie River outflow is observed as a surface layer in the temperature and salinity profiles as well as in the IR images.

### A. Atlantic Water

The Atlantic Water is a permanent feature of the western Arctic Ocean; it usually occurs at 200–900 m depth and is marked by  $T > -1^{\circ}\text{C}$  and  $S > 34\text{‰}$ . Measurements in 1976 off the lower end of the Barrow Canyon showed some displacement of the upper traces of this water (which are at  $-1.5$  to  $-1.0^{\circ}\text{C}$  as a result of mixing) from 150 m to 190 m due to the movement of low-temperature, high-salinity water down the canyon (discussed in the next paragraph). The other water types discussed here are lighter and tend to remain above the Atlantic Water.

### B. Chukchi Bottom Layer

A cold, high-salinity bottom layer was traced from the Chukchi Sea down the Barrow Canyon in previous studies.<sup>16,17</sup> This water moves slowly down the canyon during the spring; thus we found considerable amounts of it in August, as shown in the temperature sections. This water is being forced seaward by the incoming coastal flow from the south. This year, the Chukchi bottom water was at  $T = -1.7^{\circ}\text{C}$  and  $S = 32.7\text{‰}$ . An outline of this uniform water mass is shown in Figure 64 for the two Barrow Canyon surveys. These figures were obtained from the G' and O longitudinal sections. Transverse section S shows that this is about the extent of the bottom water's travel except possibly more to seaward. Comparisons of transverse sections R and S with sections I and H show this water diminished during the 10-day interval.

A plan view of the extent of the cold bottom layer is shown in Figures 65 and 66 for two thresholds,  $T < -1.6^{\circ}\text{C}$  and  $T < -1.7^{\circ}\text{C}$ . It appears as far east as  $149^{\circ}\text{W}$  longitude. Station 33 at  $145^{\circ}\text{W}$  longitude may also contain a trace of this water at  $-1.69^{\circ}\text{C}$ . The appearance of this water at station 33 would extend the eastern boundary, but water this cold is not necessarily Chukchi bottom water. Instead, it may be caused by winter freezing in the adjacent shallows and subsequent drainage of the resulting cold, saline water to lower depths — the same process responsible for the formation of the Chukchi bottom layer.

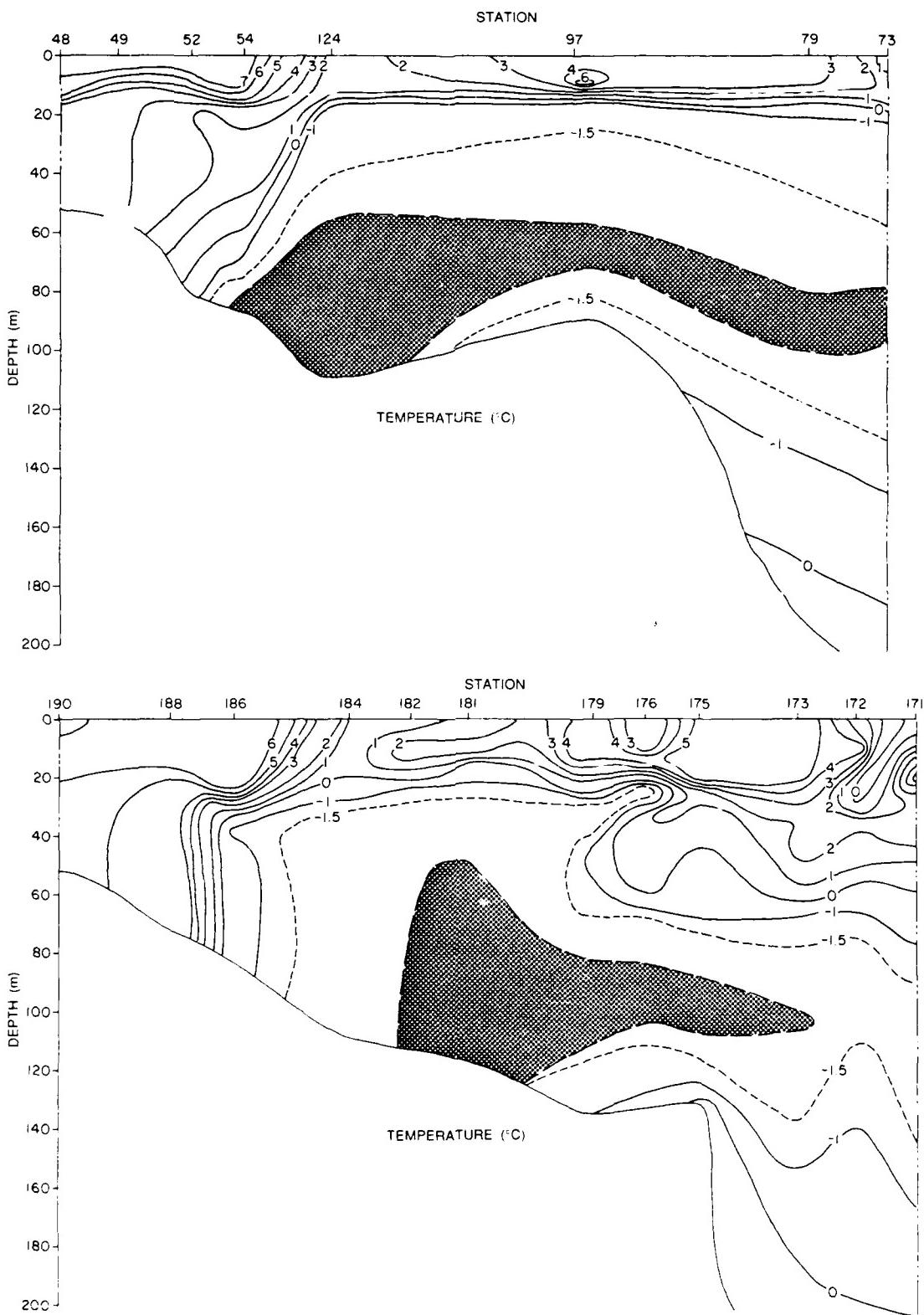
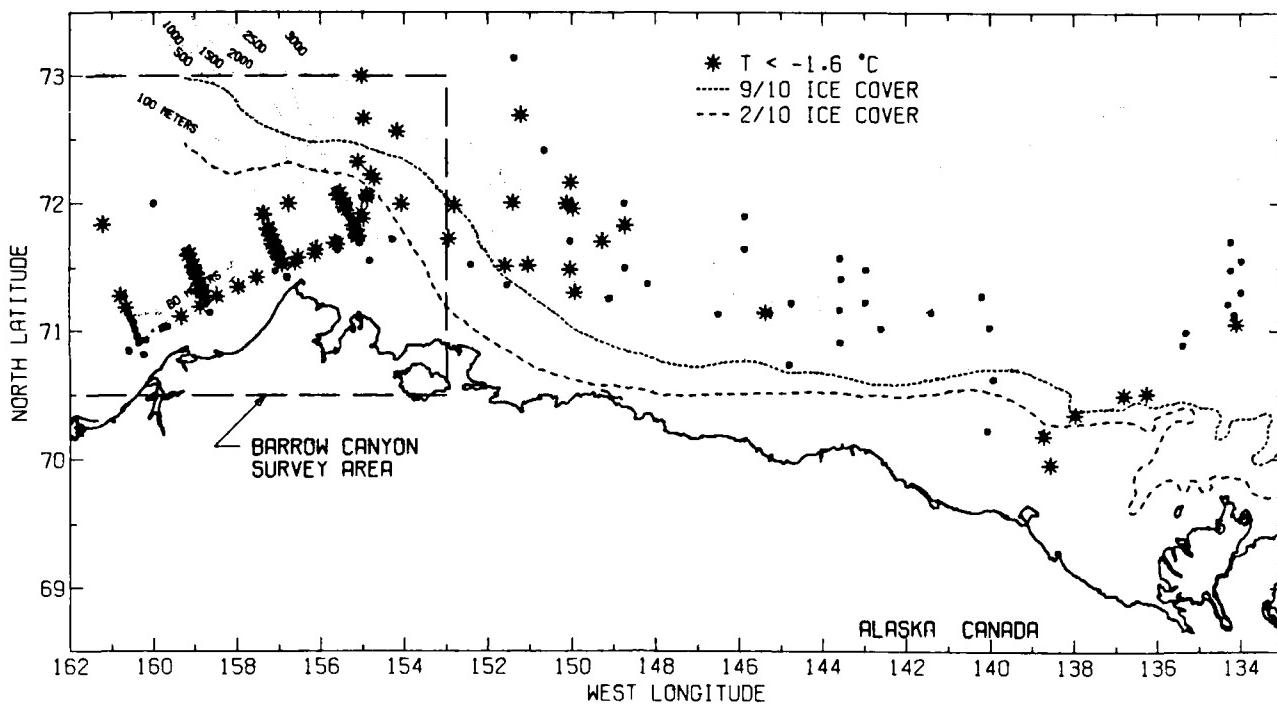
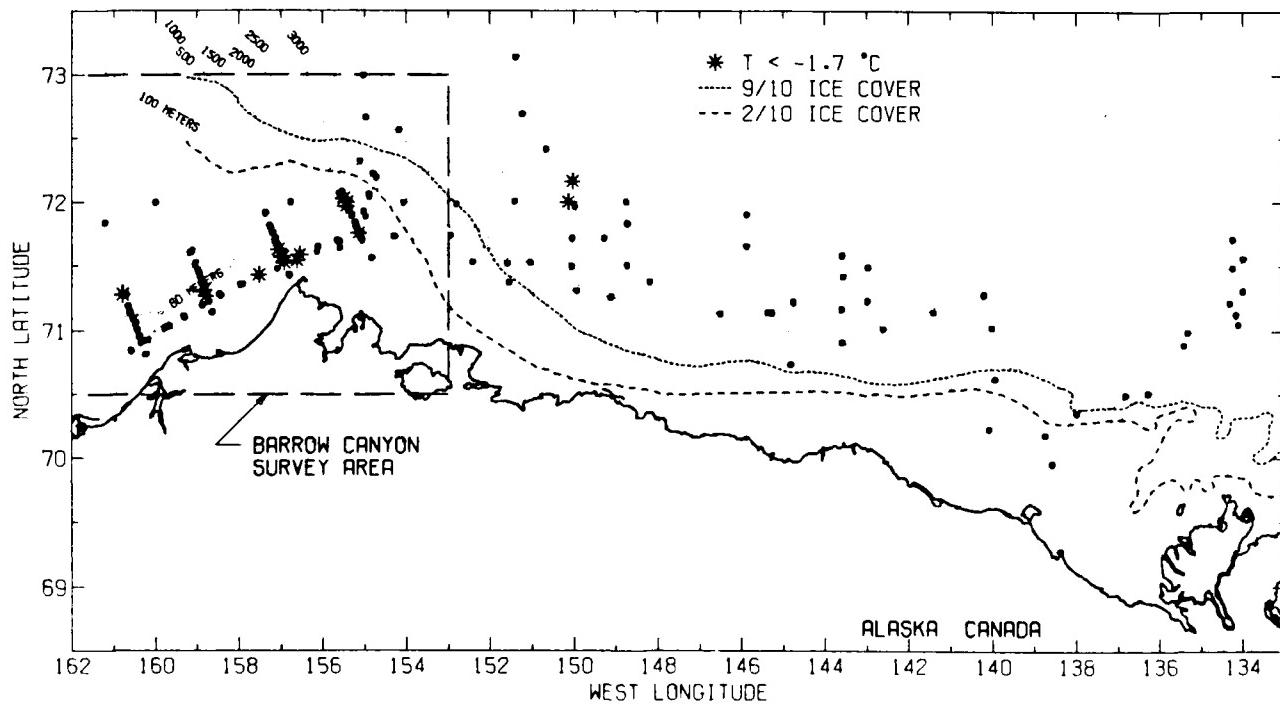


Figure 64. Chukchi Sea bottom water with constant properties ( $T = -1.7^{\circ}\text{C}$ ,  $S = 32.7\text{‰}$ ) for the two Barrow Canyon surveys.

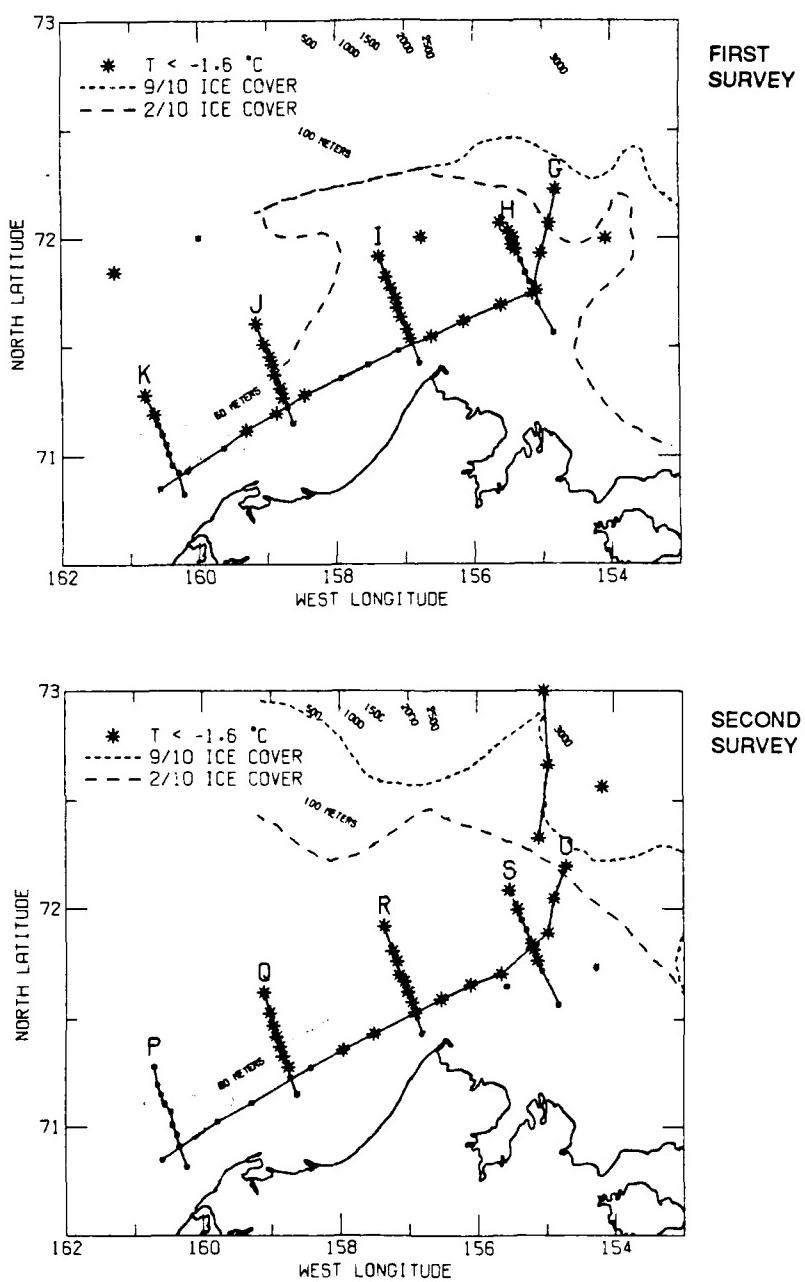


**Figure 65.** Extent of the Chukchi bottom water when defined as  $T < -1.6^{\circ}\text{C}$ . Dashed lines show the ice cover at the times of the CTD profiles, and are a composite of Figures 15–21 which show the change in coverage over the course of the measurements.



**Figure 66.** Extent of coldest Chukchi bottom water ( $T < -1.7^{\circ}\text{C}$ ).

Similar plots are shown for both surveys of the Barrow Canyon area in Figures 67 and 68. In the plots for  $T < -1.6^{\circ}\text{C}$ , the core of the drainage lies along the trough of the canyon. A comparison of the two surveys shows this water has moved down the canyon during the 10-day interval. Such flow may be intermittent.



*Figure 67. Extent of Chukchi bottom water ( $T < -1.6^{\circ}\text{C}$ ) for the two Barrow Canyon surveys.*

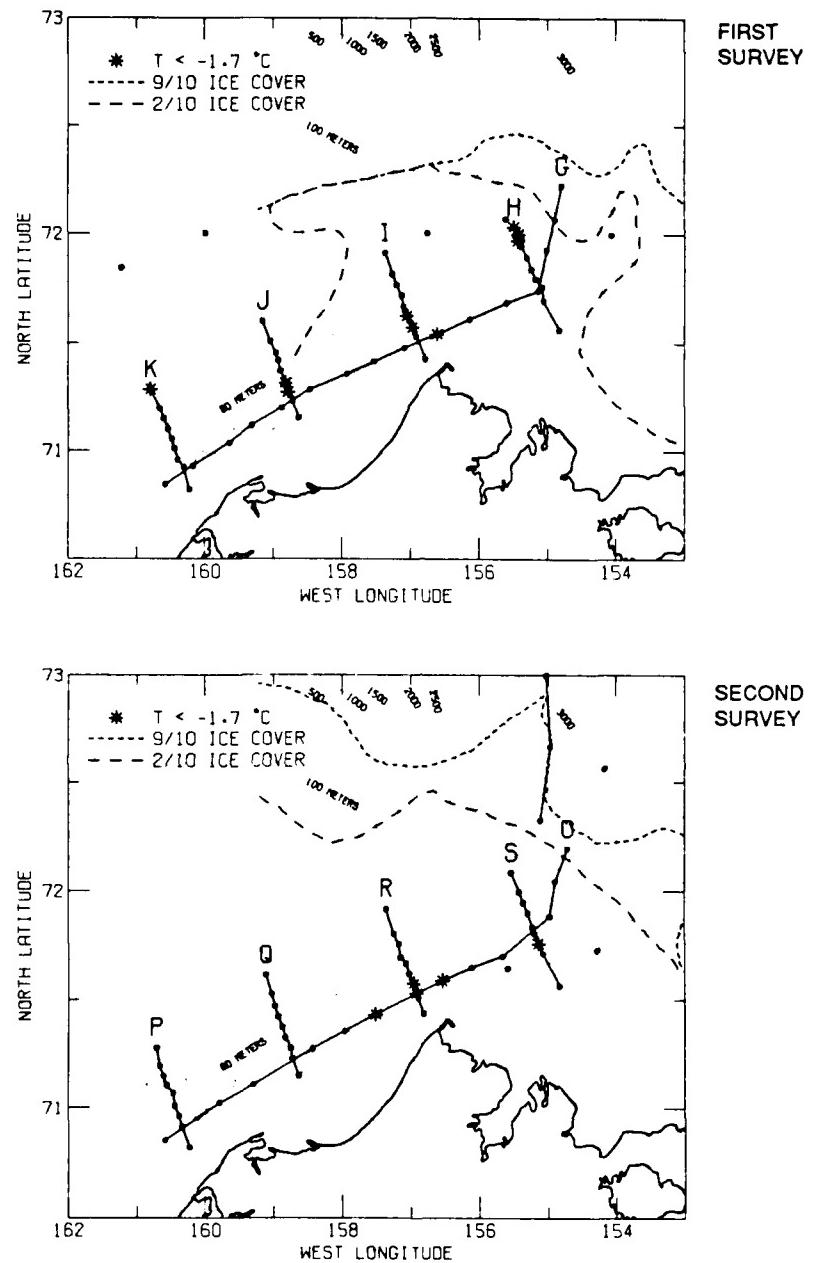
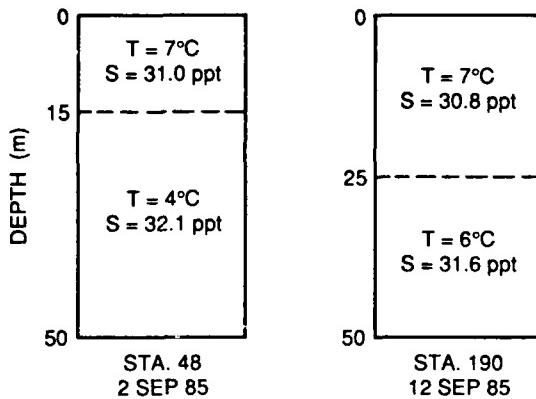


Figure 68. Extent of the coldest Chukchi bottom water ( $T < -1.7^{\circ}\text{C}$ ) for the two Barrow Canyon surveys.

### C. Coastal Flow from the South

The Alaskan Coastal Current has been studied extensively.<sup>4,6,7</sup> Aagaard<sup>18</sup> and Mountain et al.<sup>5</sup> refer to two main components: Bering Sea water and Alaskan coastal water. Whereas Bering Sea water comes from well below the surface in the Bering Sea, the coastal water is near-surface water that has been warmed in shallow areas both north and south of Bering Strait, especially in Norton Sound and Kotzebue Sound, and has subsequently been carried northward and along the coast past Pt. Hope. Two distinct examples of coastal water are apparent at stations 48 and 190, the southernmost stations that were occupied. Each appears as a uniform water mass, with a sharp gradient between (see Figure 69). As these waters move northward, they crowd the coast because of the Coriolis force and displace the existing water seaward, as shown in Figures 40–43 and 48–51. Figures 41 and 51 show that some of the incoming Bering Sea water has sufficient salinity (and therefore density) to intrude as deep as 140 m, thus merging into Atlantic Water of the same temperature and salinity.



*Figure 69.*  
*Distinct layers of water entering the survey area along the coast from the southwest.*

The horizontal extent of this warm coastal water is shown in Figure 56. Close examination of the profiles shows that the layer of coastal water is observable as far east as 148°W longitude. Additional information on the presence of Alaskan coastal water along the coast east of Pt. Barrow can be obtained from satellite imagery (Figures 8–10). Considerable surface warmth from the coastal current appears as far east as Cape Halkett. The warm water farther east is probably caused by solar warming in the shallows.

Observations of the warm layers farther to the north in prior years indicate that the warm water deposited in the Beaufort Sea spreads out over many miles before it is cooled or mixed thoroughly. Distinct layers of 0°C water were observed<sup>11</sup> in October 1984 at depths of 30–40 m at 73°20'N latitude. A short time later these layers disappeared, giving the impression that the observations were made near their northerly limit. In 1980, 40-m-thick layers of 2°C water were found at 72°04'N, 155°W. The maximum temperature of the layer remained above 0°C as the survey progressed northward to 72°50' latitude.

The remnant of this warm water has become a permanent feature of the western Arctic and has been discussed by Coachman and Barnes<sup>7</sup> who called it a "shallow temperature maximum" layer. It is described as being at 75–100 m depth, which could be the remnant of the layers observed by APL after the shallower portion has been cooled from above.

The presence of the coastal current at 148°W longitude is not surprising in light of the calculation by Mountain et al.<sup>5</sup> that the momentum of the current passing Pt. Barrow would carry it to 140°W longitude.

There have been observations of ice apparently being drawn into the coastal current north of Wainwright. This might be a partial recirculation of the coastal current after it passes Pt. Barrow, first northward, then westward in the fringe of the Beaufort Gyre, and finally returning to the coastal current near Wainwright. This agrees with a barotropic model formulated by Budgell.<sup>19</sup>

#### D. Mackenzie River Water

Mackenzie River water can be detected by its higher temperature and its low salinity. Figure 52 shows a large area with CTD maximum temperatures greater than 0°C. This area extends from 136°W to 141°W. Figure 60 shows surface temperatures to a greater accuracy with the same result.

Additional information on the distribution of the warm river water can be seen in the satellite IR images, Figures 8, 10, and 11. In Figures 8 and 11 for 5 August, the outflow occupies a blunt, broad area off the wide river delta. There is no indication in section B (Figure 33) of the warm area shown farther out, possibly because section B was taken 2 weeks later or because the warm water was beneath the ice cover as shown in Figure 60. Later, on 25 August, as shown in Figure 10, a warm plume appears to extend almost as far west as Barter Island. The core temperature appears 2° high as it is off Pt. Barrow, 4–5°C.

Figure 63 shows low surface salinities over a slightly broader area, 135–141°W longitude.

The existence of warm temperatures about 150 km off the coast north of the Mackenzie River, and low salinities at about 220 km, indicates the presence of river water. This warm water would be expected to cause deterioration in the ice. At times, easterly winds move the ice eastward from Banks Island, and the resulting open area allows the spread of river water northward. Penetration into the pack then causes "rotting" of the ice. Such deterioration was observed in the fall of 1984,<sup>11</sup> when the large floe that was initially selected as a camp site broke into several pieces before we reached it. The search was then redirected to the northwest, where more solid floes were found.

### E. Water Types Seen in the TS Diagrams

Individual TS diagrams for many of the profiles are shown in Appendix B. Composite diagrams for several stations in the Barrow Canyon area, the central region, and the eastern portion are shown in Figures 70–73. Heavy concentrations of dots in the plots indicate the presence of some of the water masses discussed above. For ease of comparison, Figure 74 shows where the various water types would be positioned on the TS

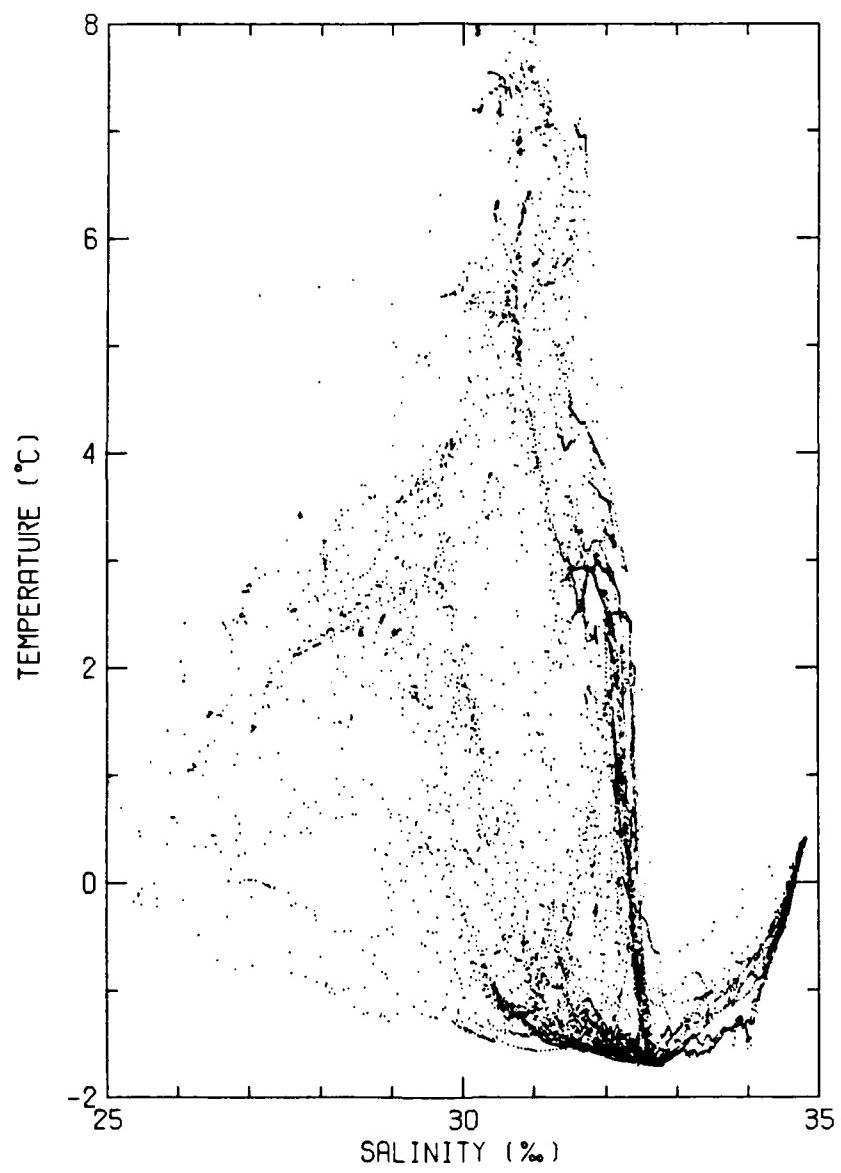


Figure 70. Composite TS diagram for the first Barrow Canyon survey, stations 47–147 (APL stations only).

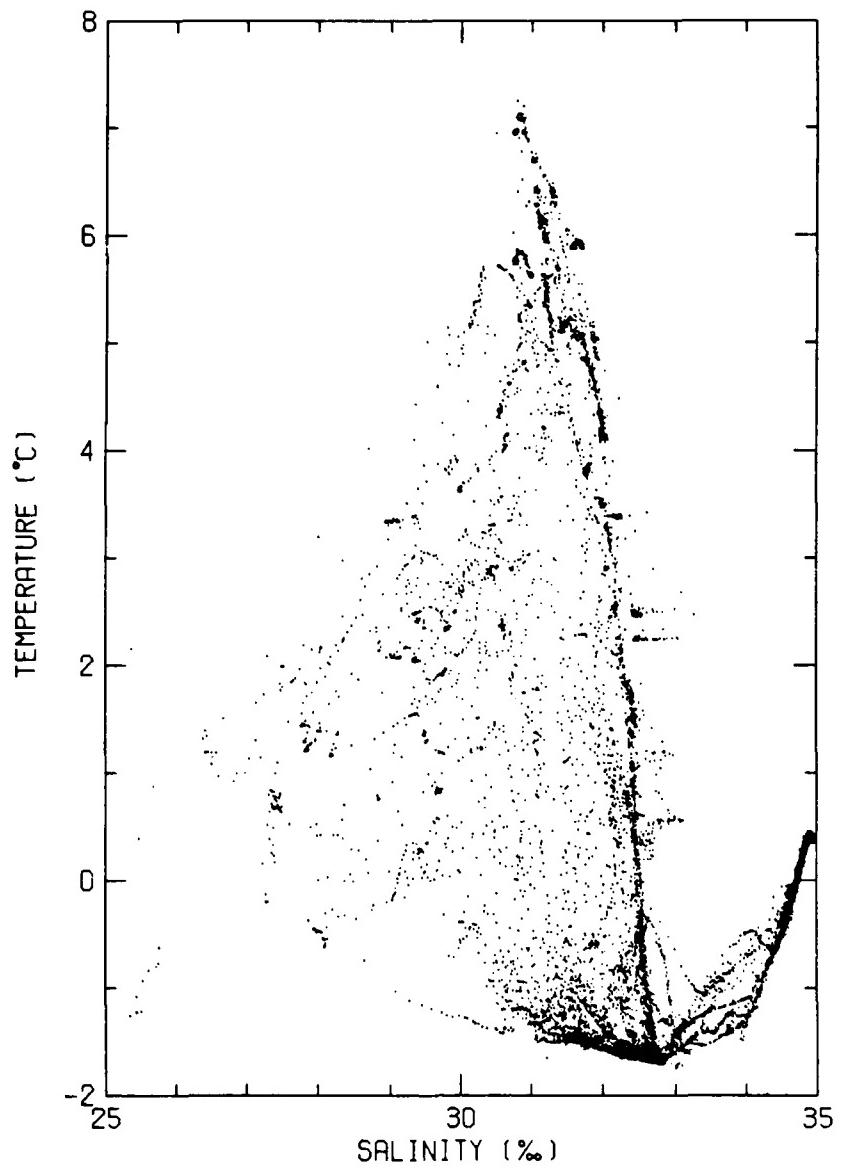


Figure 71. Composite TS diagram for the second Barrow Canyon survey, stations 174–263 (APL stations only).

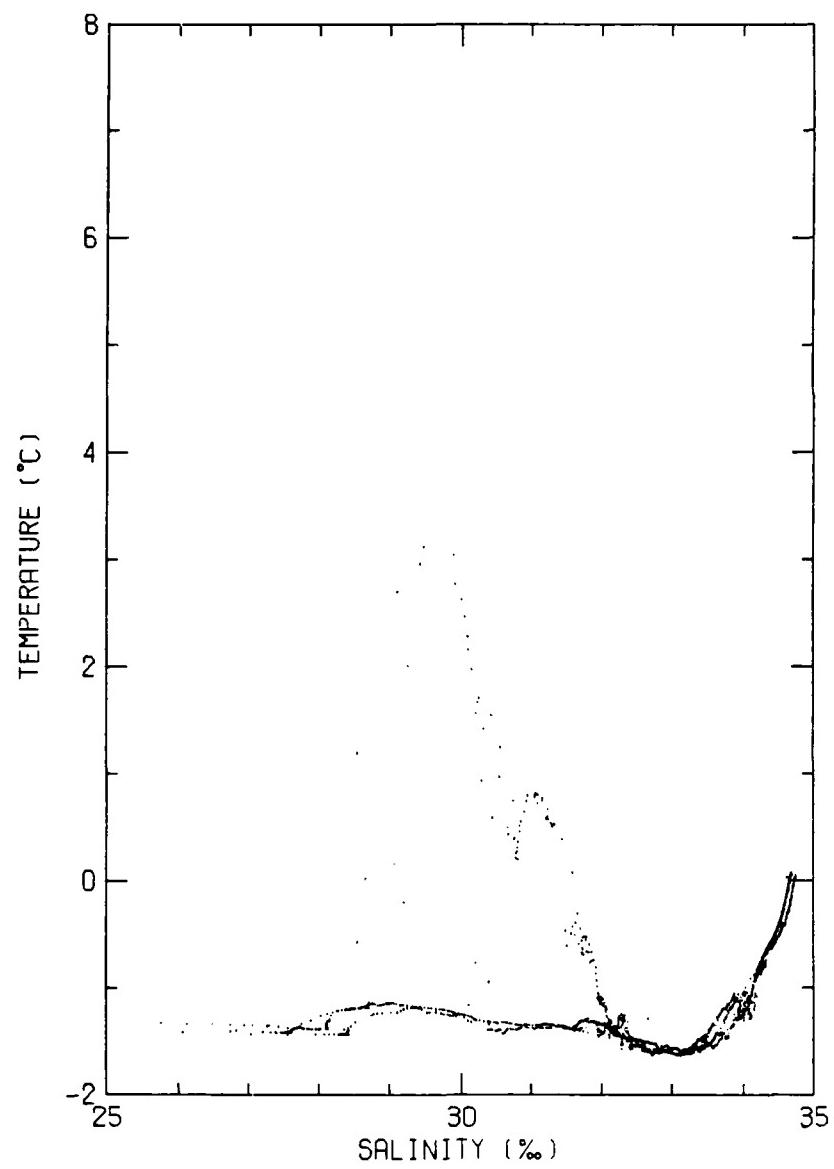


Figure 72. Composite TS diagram for the central portion of the survey area, stations 37, 41, and 159.

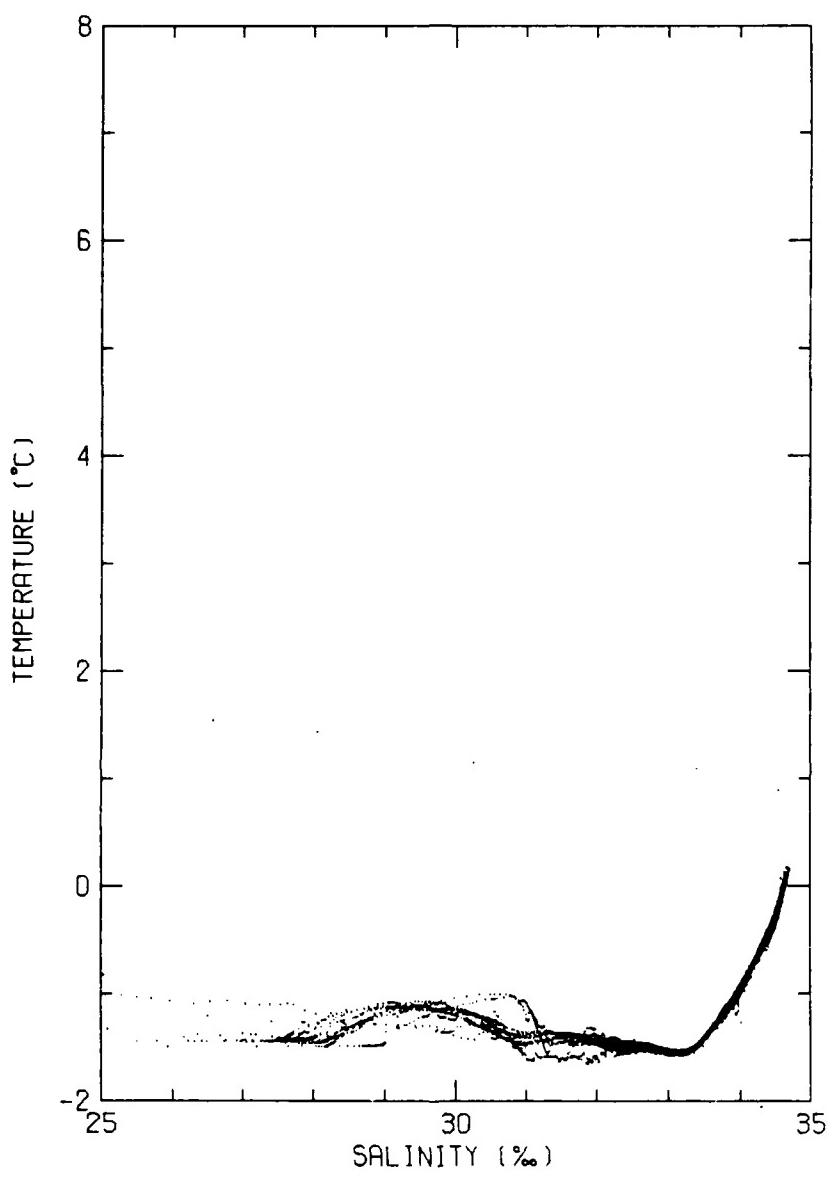
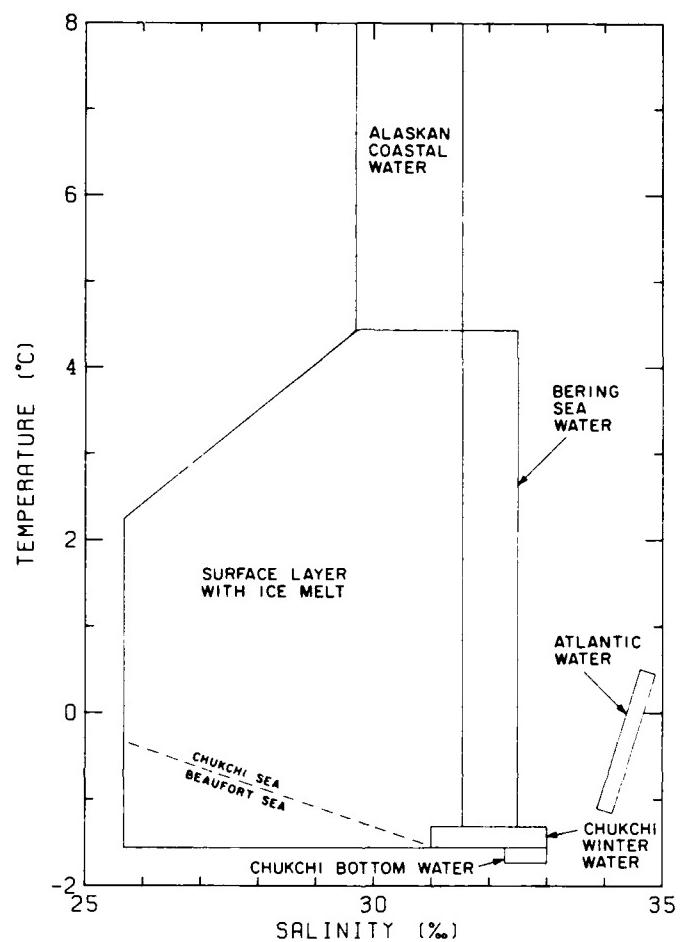


Figure 73. Composite TS diagram for the eastern portion of the survey area, stations 1, 11, 12, 24–32, 34, and 35.



*Figure 74. The outline of various water types on the TS diagram.*

diagram before they mix with other types. Atlantic Water, for example, would occupy a narrow band at the right. The Chukchi bottom layer is the dark area in Figures 70 and 71 near  $T = -1.7^{\circ}\text{C}$  and  $S = 32.7\text{‰}$ . This is not the same water as in Figures 72 and 73, as evidenced by the fact that the plot extends below (to a lower temperature than) the data in those figures.

The warm ( $>1^{\circ}\text{C}$ ) water brought northward by the Alaskan Coastal Current from the shallows of Norton and Kotzebue sounds is not easily separable from the denser Bering Sea water described by Mountain et al.,<sup>5</sup> but their choice of 31.5–32.5‰ for Bering Sea water seems appropriate. Figure 72 shows the trace of warm water at station 159 which appears to be the eastern extreme of the  $+1.0^{\circ}\text{C}$  water of the warm intrusion. Its position outside the water types designated in Figure 74 is due to cooling as the result of mixing with the existing winter water.

## XI. CONCLUSIONS

We have observed the influence of three major inputs of water into the southern Beaufort Sea: a drainage of bottom water from the Chukchi Sea down the Barrow Canyon; the Alaskan Coastal Current, primarily from the Bering Sea; and the runoff from the Mackenzie River.

### A. Chukchi Bottom Water

Prior measurements in the spring have shown a bottom layer of water with a slightly higher salinity than typical Chukchi Sea winter water. This water has been observed to flow down the Barrow Canyon during the spring and summer. The September 1985 measurements show a uniform mass of what appears to be this bottom water ( $-1.7^{\circ}\text{C}$ ,  $32.7\text{‰}$ ) at about 100 m depth which has slowly migrated down the Barrow Canyon and come to rest above the layer of Atlantic Water present in the Arctic Ocean. This Chukchi bottom water is observed as far east as  $149^{\circ}\text{W}$  longitude. Along the shoreward side of the canyon, it is being displaced by the densest portion of the coastal current.

### B. Alaskan Coastal Current

The Alaskan Coastal Current originates in the Bering Sea and passes northward through Bering Strait. In the summer, it entrains the warmed waters of Norton Sound and Kotzebue Sound. Passing Pt. Hope, the warm water spreads generally northward, but there is a persistent branch to the right along the coast to Pt. Barrow. The August–September 1985 measurements show the warm intrusion closely following the coast and penetrating to a depth of 140 m in the Barrow Canyon. Satellite images show that, when the surface waters of the intrusion pass Pt. Barrow, they continue in an easterly direction for 100 km before mixing with the existing waters. Our CTD profiles in the area in late August 1985 show evidence of the intrusion as far east as  $148^{\circ}\text{W}$  longitude. Eventually the warm mass collapses into thin layers which have been observed (in 1984) as far north as  $73^{\circ}20'\text{N}$  latitude. Satellite images show that when the waters pass Pt. Barrow a warm surface layer also spreads along the coast as far east as Cape Halkett.

### C. Mackenzie River Outflow

The influence of the Mackenzie River was observed in the surface temperatures 150 km off the coast and in surface salinities 220 km off the coast. Its extent depends somewhat on the location of the ice pack, which tends to block the runoff's northward movement. In August–September 1985, the river water extended from  $136$  to  $141^{\circ}\text{W}$  longitude.

Based on measurements of the river's flow and temperature at gauging stations, we calculate that the annual heat input by the Mackenzie River into the Beaufort Sea, above the usual sea temperature, is  $2.4 \times 10^{15}$  kilogram calories. With its effect on salinity being greater than its effect on temperature, the Mackenzie River outflow influences Beaufort Sea oceanography nearly as much as the Alaskan Coastal Current.

## REFERENCES

1. G.R. Garrison and E.A. Pence, "Studies in the marginal ice zone of the Chukchi and Beaufort seas, a report on Project MIZPAC 71B," APL-UW 7223, Applied Physics Laboratory, University of Washington, Seattle, 1973.
2. G.R. Garrison, E.A. Pence, H.R. Feldman, and S.R. Shah, "Studies in the marginal ice zone of the Chukchi Sea: Analysis of 1972 data," APL-UW 7311, Applied Physics Laboratory, University of Washington, Seattle, March 1974.
3. G.R. Garrison and P. Becker, "Marginal ice zone oceanographic measurements: Bering and Chukchi seas, 1973 and 1974," APL-UW 7505, Applied Physics Laboratory, University of Washington, Seattle, September 1975.
4. K. Ahlnäs and G.R. Garrison, "Satellite and oceanographic observations of the warm coastal current in the Chukchi Sea," *Arctic*, **37**, 244-254 (1984).
5. D.G. Mountain, L.K. Coachman, and K. Aagaard, "On the flow through Barrow Canyon," *J. Phys. Oceanogr.*, **6**, 461-470 (1976).
6. G.L. Hufford, "Warm water advection in the southern Beaufort Sea, August–September 1971," *J. Geophys. Res.*, **78**, 2702-2707 (1973).
7. L.K. Coachman and C.A. Barnes, "The contribution of Bering Sea water to the Arctic Ocean," *Arctic*, **14**, 147-161 (1961).
8. A. Stigelbrandt, "The North Pacific: A global scale estuary," *J. Phys. Oceanogr.*, **14**, 464-470 (1984).
9. G.R. Garrison, J.T. Shaw, and M.L. Welch, "Arctic oceanographic measurements, 1978–1980," APL-UW 8112, Applied Physics Laboratory, University of Washington, Seattle, 1982.
10. G.R. Garrison, M.L. Welch, and J.T. Shaw, "Arctic oceanographic measurements, 1982," APL-UW 4-84, Applied Physics Laboratory, University of Washington, Seattle, July 1984.
11. G.R. Garrison, T. Wen, and M.L. Welch, "Environmental measurements in the Beaufort Sea, Autumn 1984," APL-UW 3-85, Applied Physics Laboratory, University of Washington, March 1985.
12. R.H. Herlinveaux and B.R. de Lange Boom, "Physical oceanography of the southeastern Beaufort Sea," Beaufort Sea Technical Report No. 18, Beaufort Sea Project, Department of the Environment, Canada, December 1975.
13. W.S. Huggett, M.J. Woodward, F. Stephenson, F.V. Hermiston, and A. Douglas, "Near bottom currents and offshore tides," Beaufort Sea Project, Technical Report No. 18, Department of the Environment, Canada, 1975.

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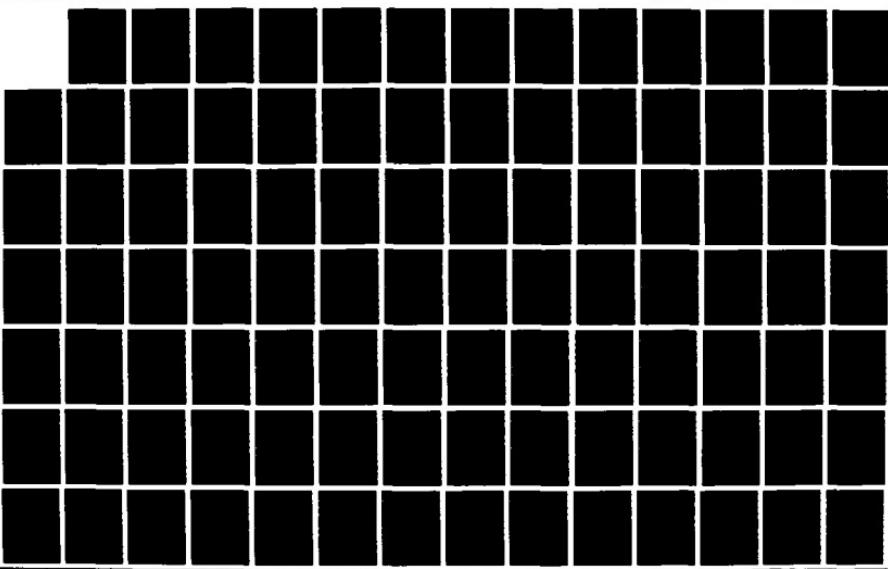
COASTAL OCEANOGRAPHY IN THE BEaufort SEA SUMMER 1985  
(U) WASHINGTON UNIV SEATTLE APPLIED PHYSICS LAB  
P BECKER ET AL. JUL 87 APL-UH-8785 N00024-85-C-6264

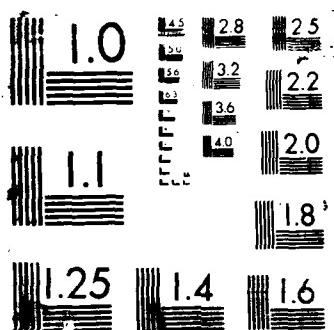
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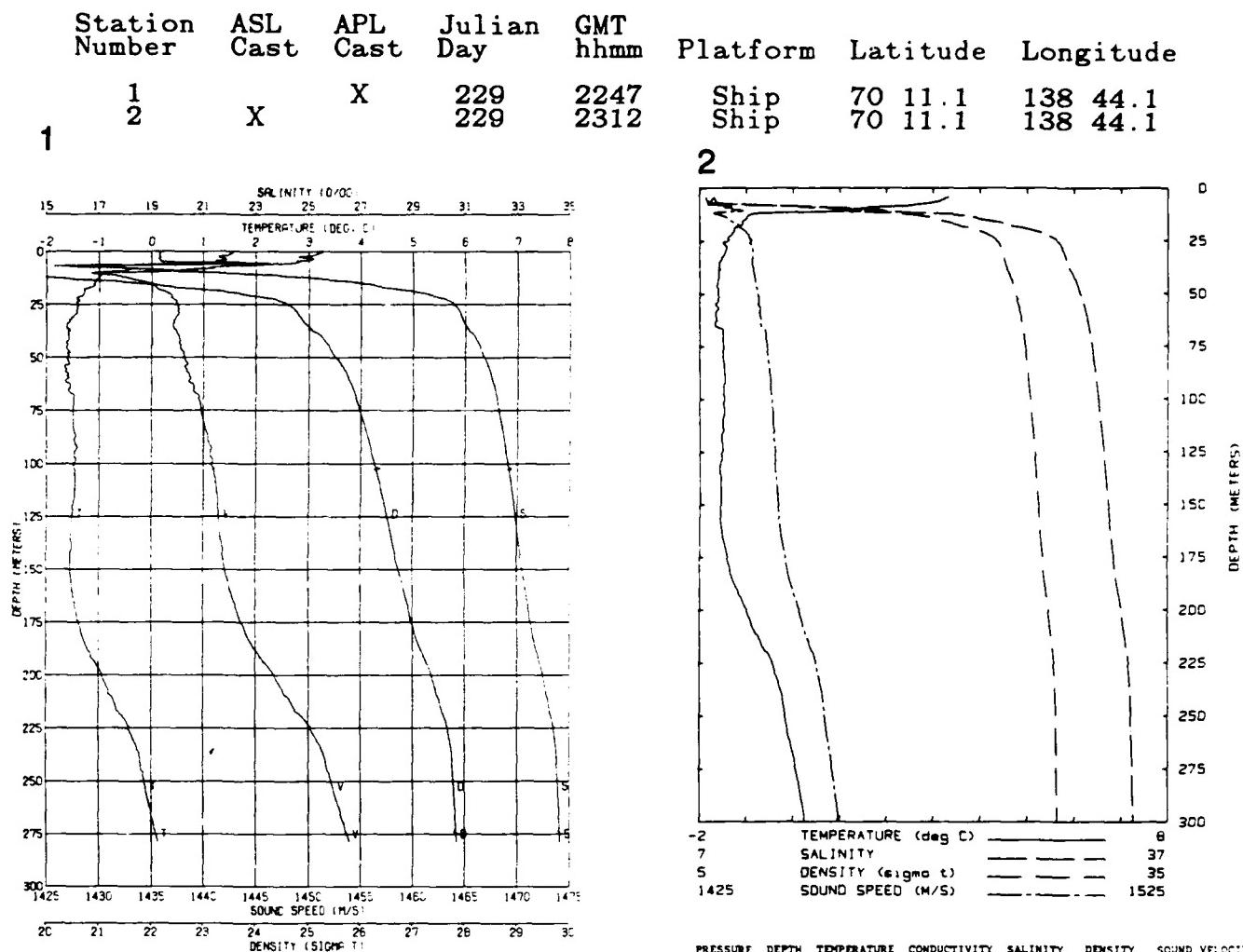


14. K.F. Davies, "Mackenzie River input to the Beaufort Sea," Beaufort Sea Technical Report No. 15, Department of the Environment, Clennan Square, 110-11 Ave. SW., Calgary, Alberta T2R 0B8, December 1975.
15. G.R. Garrison, "Chukchi Sea oceanography: 1975 measurements and a review of coastal current properties," APL-UW 7614, Applied Physics Laboratory, University of Washington, Seattle, 27 November 1976.
16. G.R. Garrison and P. Becker, "The Barrow Canyon: A drain for the Chukchi Sea," *J. Geophys. Res.*, 81, 4445-4453 (1976).
17. G.R. Garrison and R.G. Paquette, "Warm water interactions in the Barrow Canyon in winter," *J. Geophys. Res.*, 87, 5853-5859 (1982).
18. K. Aagaard, "The Beaufort Undercurrent" in *The Alaskan Beaufort Sea: Ecosystems and Environments*, P.W. Barnes, D.M. Schell, and E. Reimnitz, eds. (Academic Press, Orlando, 1984), pp. 47-71.
19. Budgell, P., "Simulation of wind-induced circulation in the southern Beaufort Sea," presented at the NOAA Workshop on Modeling Ocean and Sea Ice Transport in the Northern Bering and Chukchi Seas, Pacific Marine Environmental Laboratory, Seattle, 28 October 1986.

## **APPENDIX A**

### **CTD Profiles**

This appendix contains the CTD profiles taken by the Applied Physics Laboratory (APL) and the Arctic Submarine Laboratory (ASL) from 17 August to 20 September 1985. See Table II for list of stations.



DEPTH (M) T (C) V (M/S) DENSITY S (‰)

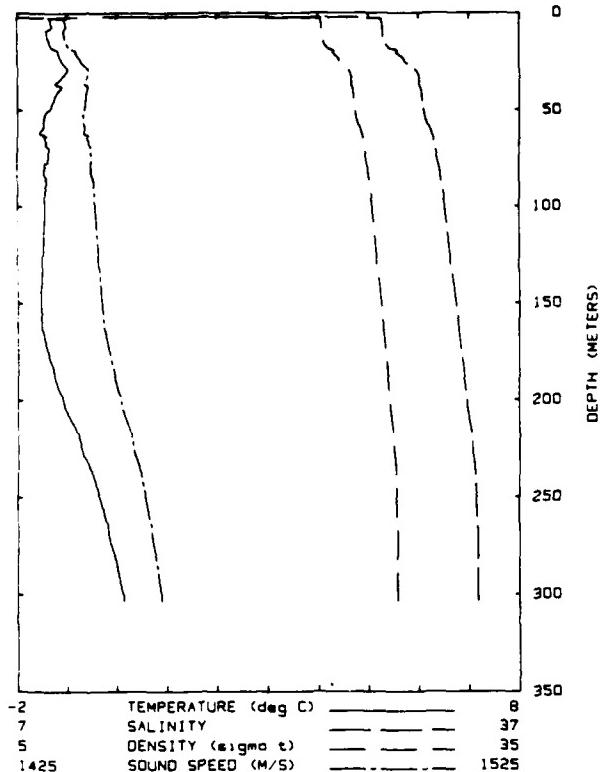
5.2	2.78	1443.5	16.89	21.11
10.3	-0.96	1429.3	17.59	21.88
15.1	-1.10	1434.8	21.83	27.14
20.1	-1.30	1436.7	23.77	29.55
25.2	-1.38	1437.6	24.62	30.59
30.1	-1.46	1437.5	24.82	30.84
35.0	-1.62	1437.0	24.98	31.03
40.1	-1.59	1437.6	25.23	31.35
45.3	-1.62	1437.8	25.40	31.55
50.3	-1.59	1438.2	25.53	31.72
55.3	-1.62	1438.3	25.67	31.89
60.1	-1.65	1438.7	25.76	32.00
65.3	-1.59	1439.0	25.86	32.12
70.0	-1.48	1439.6	25.93	32.20
75.1	-1.48	1439.8	25.99	32.29
80.2	-1.49	1440.0	26.06	32.36
85.3	-1.47	1440.3	26.11	32.43
90.1	-1.46	1440.5	26.16	32.50
95.2	-1.47	1440.6	26.21	32.56
100.2	-1.49	1440.7	26.28	32.64
110.3	-1.47	1441.2	26.37	32.76
120.0	-1.51	1441.3	26.47	32.88
130.3	-1.52	1441.6	26.56	32.99
140.1	-1.53	1441.8	26.64	33.09
150.1	-1.55	1442.1	26.74	33.20
160.1	-1.51	1442.6	26.83	33.33
170.1	-1.43	1443.3	26.94	33.45
180.0	-1.33	1444.1	27.04	33.58
190.0	-1.16	1445.3	27.19	33.78
200.3	-0.93	1446.8	27.37	34.01
210.2	-0.74	1448.1	27.48	34.16
220.3	-0.51	1449.6	27.62	34.34
230.1	-0.34	1450.7	27.71	34.46
240.3	-0.21	1451.6	27.76	34.53
250.1	-0.14	1452.2	27.78	34.57
260.3	-0.05	1452.8	27.80	34.59
270.2	-0.04	1453.4	27.83	34.63
278.8	.12	1453.9	27.84	34.65

PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dbar) (M) (deg C) (mS/cm)

4.3	4.3	3.34	28.880	7.427	5.975	1428.2
7.5	7.4	2.92	28.073	7.839	6.389	1427.0
11.4	11.3	0.90	17.303	19.287	15.484	1424.5
18.3	18.2	-1.08	21.430	25.986	20.893	1432.1
21.0	21.7	-1.30	23.578	20.051	21.370	1435.3
28.3	28.2	-1.61	24.342	30.181	24.294	1436.4
34.0	34.7	-1.55	24.481	30.533	24.573	1435.3
41.7	41.5	-1.58	24.759	30.830	24.695	1436.8
48.4	48.1	-1.59	25.007	31.278	25.177	1437.4
54.7	54.4	-1.62	25.182	31.552	25.399	1437.7
60.4	60.1	-1.66	25.335	31.767	25.590	1437.9
66.5	66.1	-1.60	25.522	31.978	25.744	1438.6
72.6	72.1	-1.50	25.674	32.083	25.827	1439.3
78.6	78.1	-1.49	25.778	32.206	25.926	1435.6
84.1	84.1	-1.48	25.878	32.313	26.012	1440.0
90.3	89.7	-1.45	25.953	32.399	26.082	1441.2
96.3	95.7	-1.49	25.993	32.497	26.153	1440.3
102.2	101.6	-1.48	26.061	32.573	26.223	1441.5
108.2	107.5	-1.45	26.151	32.672	26.303	1440.8
114.2	113.4	-1.51	26.172	32.754	26.370	1440.6
119.8	119.1	-1.54	26.210	32.836	26.437	1440.9
125.0	125.1	-1.51	26.284	32.900	26.488	1441.2
131.0	131.0	-1.55	26.318	32.987	26.560	1441.1
137.9	136.9	-1.54	26.383	33.058	26.617	1441.5
143.6	142.6	-1.55	26.421	33.114	26.662	1441.6
149.5	148.6	-1.55	26.471	33.179	26.716	1441.8
155.5	154.4	-1.55	26.536	33.264	26.784	1442.2
161.4	160.3	-1.52	26.610	33.339	26.844	1442.3
167.4	166.2	-1.48	26.694	33.415	26.905	1442.6
173.2	172.0	-1.43	26.813	33.505	26.977	1443.2
179.1	177.6	-1.38	26.815	33.582	27.038	1443.6
185.1	183.7	-1.31	27.036	33.871	27.107	1444.1
189.1	188.7	-1.20	27.232	33.808	27.216	1444.9
197.1	195.6	-1.07	27.436	33.943	27.320	1445.8
202.0	201.2	-0.96	27.611	34.052	27.404	1446.6
208.0	207.1	-0.87	27.763	34.150	27.480	1447.2
214.7	213.1	-0.72	27.881	34.272	27.572	1448.2
220.7	218.9	-0.60	28.183	34.378	27.654	1449.0
226.0	224.2	-0.44	28.389	34.474	27.724	1449.9
230.9	229.1	-0.38	28.456	34.515	27.754	1450.4
235.7	233.8	-0.30	28.567	34.571	27.795	1450.9
240.5	238.5	-0.24	28.645	34.606	27.821	1451.3
245.2	243.2	-0.20	28.692	34.622	27.832	1451.5
250.4	248.3	-0.17	28.740	34.643	27.847	1451.8
255.8	253.0	-0.12	28.780	34.657	27.857	1452.1
261.1	258.9	-0.09	28.833	34.674	27.866	1452.4
268.2	263.0	-0.03	28.894	34.687	27.884	1452.8
271.1	268.0	0.02	28.968	34.719	27.896	1453.1
276.3	273.9	0.06	28.015	34.733	27.908	1453.4
281.5	279.1	0.11	28.072	34.750	27.919	1453.7
286.5	284.0	0.15	28.121	34.762	27.926	1454.0
291.7	289.2	0.19	28.185	34.777	27.937	1454.3
286.7	284.1	0.23	28.213	34.788	27.943	1454.6
301.6	298.9	0.28	28.249	34.799	27.950	1454.8
304.7	302.0	0.29	28.282	34.808	27.956	1455.0
305.8	303.2	0.29	28.288	34.810	27.958	1455.1

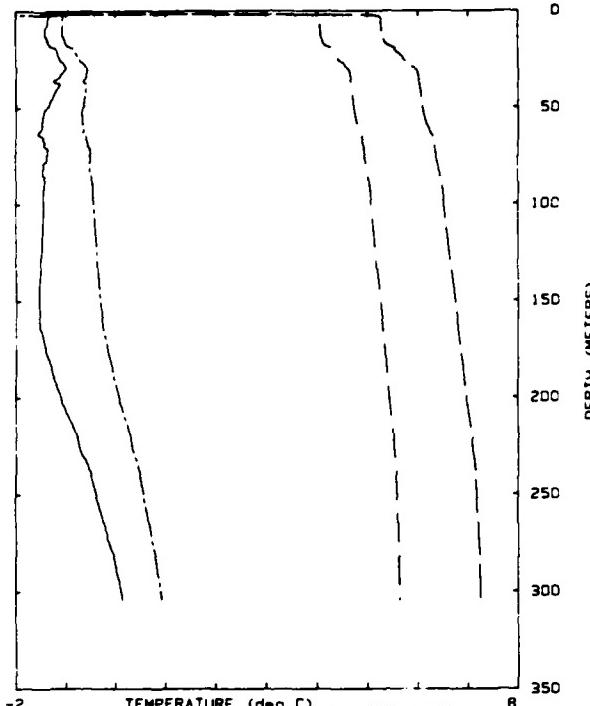
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4	X		230	1918	Ship	71 3.6	134 6.7

3



-2 TEMPERATURE (deg C) 8  
7 SALINITY 37  
5 DENSITY ( $\sigma_t$ ) 35  
1425 SOUND SPEED (M/S) 1525

4



-2 TEMPERATURE (deg C) 8  
7 SALINITY 37  
5 DENSITY ( $\sigma_t$ ) 35  
1425 SOUND SPEED (M/S) 1525

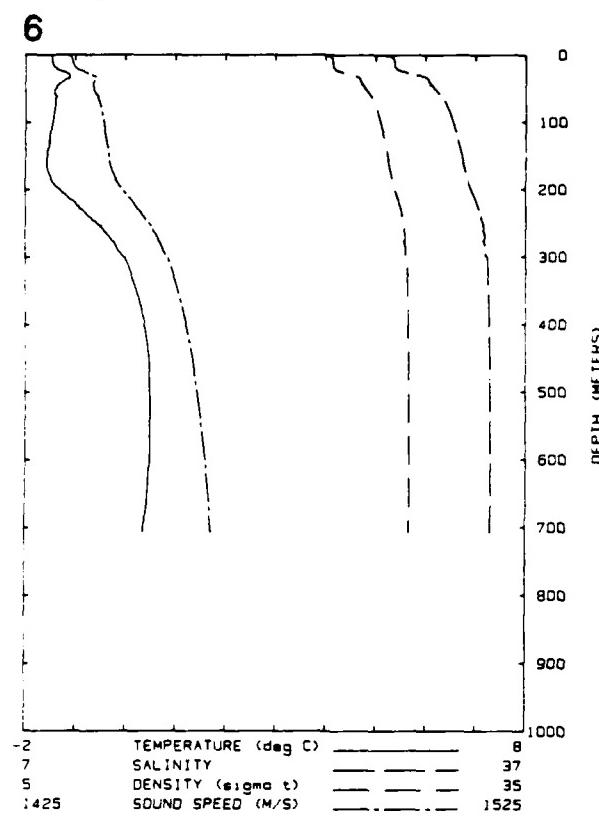
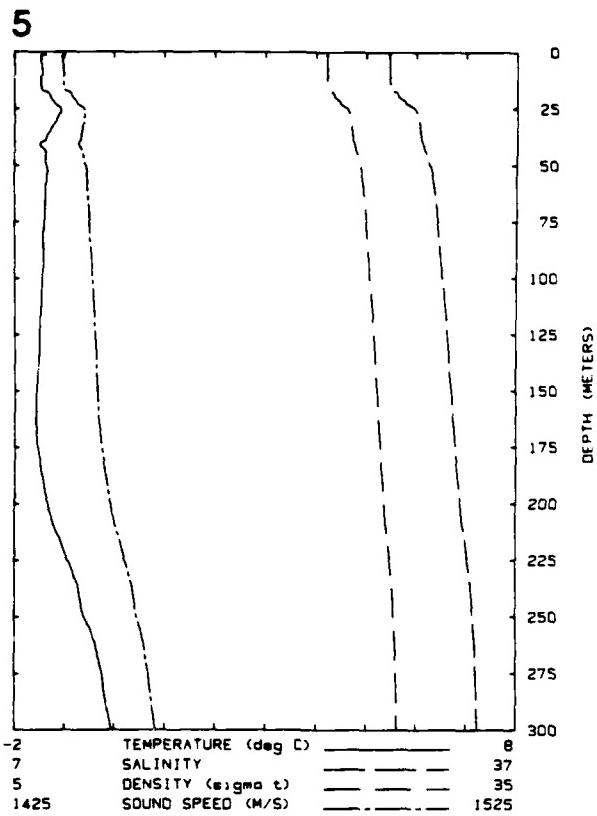
PRESSURE (dbar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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1.6	1.6	-0.89				
1.5	1.5	-0.87				
1.6	1.6	-0.87				
1.5	1.5	-0.85				
1.6	1.6	-0.85				
1.6	1.6	-0.88				
1.6	1.6	-0.77				
3.3	3.3	-1.27				
7.5	7.5	-1.37				
12.7	12.8	-1.44				
18.0	17.9	-1.41				
23.3	23.2	-1.31				
28.6	28.5	-1.28				
34.0	33.8	-1.32				
39.4	39.2	-1.40				
44.8	44.6	-1.45				
50.2	49.9	-1.55				
56.1	55.8	-1.59				
62.6	62.2	-1.63				
68.1	68.7	-1.57				
75.7	75.2	-1.55				
81.5	81.0	-1.58				
87.7	87.2	-1.57				
94.2	93.6	-1.57				
100.8	101.1	-1.58				
107.4	106.7	-1.56				
113.0	112.2	-1.57				
119.5	118.7	-1.56				
126.1	125.3	-1.56				
132.7	131.8	-1.55				
139.2	138.2	-1.56				
145.9	144.9	-1.56				
152.7	151.8	-1.56				
159.4	158.2	-1.53				
166.2	164.9	-1.49				
172.7	171.5	-1.45				
179.5	178.2	-1.38				
186.3	184.9	-1.30				
193.1	191.6	-1.23				
199.9	198.4	-1.12				
206.6	205.0	-1.06				
213.4	211.7	-0.95				
220.3	218.6	-0.80				
227.7	225.9	-0.73				
235.1	233.2	-0.59				
242.0	240.1	-0.48				
248.1	246.0	-0.40				
255.3	253.1	-0.31	28.170	34.043	27.370	1480.4
262.6	260.4	-0.26	28.213	34.145	27.448	1451.0
269.0	267.7	-0.18	28.408	34.206	27.496	1451.5
276.1	273.7	-0.14	28.499	34.287	27.543	1451.0
282.7	280.3	-0.07	28.597	34.321	27.583	1452.4
288.6	286.3	0.00	28.701	34.377	27.625	1452.9
294.7	292.2	0.05	28.784	34.426	27.661	1453.3
300.8	298.0	0.08	28.850	34.468	27.693	1453.6

PRESSURE (dbar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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1.7	1.7	-0.30	28.185	34.013	7.125	1412.8
1.6	1.6	-0.30	28.070	34.084	7.040	1412.5
1.6	1.6	-0.30	28.022	34.027	6.984	1412.5
1.7	1.7	-0.29	28.028	34.014	6.902	1412.3
4.5	4.5	-1.38	23.333	28.781	23.153	1434.4
9.0	9.7	-1.41	23.333	28.842	23.203	1434.3
15.8	15.7	-1.38	23.491	28.998	23.327	1434.9
22.1	22.0	-1.16	24.278	29.851	24.015	1437.1
28.6	28.4	-1.01	24.871	30.835	24.644	1439.0
35.1	34.8	-1.14	25.150	31.022	24.960	1438.9
41.4	41.1	-1.19	25.226	31.155	25.069	1439.0
47.8	47.5	-1.31	25.185	31.242	25.142	1439.6
54.1	53.8	-1.45	25.175	31.354	25.236	1439.2
60.4	60.1	-1.48	25.335	31.599	25.434	1438.5
66.7	66.3	-1.45	25.555	31.866	25.853	1439.1
73.1	72.6	-1.38	25.762	32.048	25.795	1439.9
79.4	78.0	-1.44	25.808	32.189	25.911	1439.8
85.0	85.2	-1.44	25.839	32.368	26.056	1440.2
92.4	91.8	-1.45	25.989	32.441	26.116	1440.3
98.9	98.2	-1.44	26.088	32.537	26.193	1440.6
105.4	104.7	-1.45	26.121	32.614	26.256	1440.8
112.0	111.2	-1.46	26.172	32.695	26.322	1440.9
118.5	117.7	-1.47	26.228	32.783	26.393	1441.1
124.8	124.1	-1.48	26.282	32.860	26.455	1441.3
131.5	130.6	-1.50	26.337	32.955	26.533	1441.4
138.0	137.1	-1.52	26.403	33.082	26.620	1441.6
144.6	143.5	-1.56	26.564	33.182	26.701	1441.7
151.1	150.0	-1.55	26.522	33.249	26.772	1441.9
157.5	156.3	-1.53	26.588	33.328	26.835	1442.2
163.9	162.7	-1.52	26.859	33.403	26.899	1442.4
170.5	169.2	-1.48	26.788	33.501	26.974	1443.0
177.0	175.7	-1.41	26.881	33.571	27.029	1443.4
183.5	182.3	-1.32	27.028	33.677	27.112	1444.0
189.9	188.4	-1.28	27.142	33.758	27.174	1444.6
196.4	194.9	-1.18	27.301	33.881	27.257	1445.3
202.9	201.3	-1.08	27.432	33.940	27.318	1445.9
209.4	207.8	-0.99	27.593	34.048	27.403	1446.6
215.8	214.1	-0.88	27.784	34.182	27.490	1447.4
222.5	220.6	-0.76	27.930	34.247	27.554	1448.1
229.1	227.3	-0.71	28.020	34.300	27.595	1448.5
235.8	233.9	-0.57	28.217	34.410	27.878	1449.4
241.6	239.8	-0.48	28.335	34.485	27.719	1450.0
247.3	245.3	-0.43	28.408	34.501	27.748	1450.4
253.8	251.7	-0.38	28.501	34.545	27.778	1450.8
260.8	258.4	-0.29	28.603	34.590	27.811	1451.4
267.5	265.2	-0.22	28.888	34.620	27.831	1451.8
273.8	271.5	-0.16	28.755	34.840	27.844	1452.2
280.1	277.7	-0.08	28.844	34.878	27.889	1452.7
286.2	283.7	-0.00	28.949	34.709	27.882	1453.2
292.1	289.8	0.03	28.990	34.721	27.800	1453.5
297.7	295.1	0.10	29.082	34.743	27.814	1453.9
302.8	300.2	0.13	29.100	34.758	27.823	1454.2
309.5	302.9	0.19	29.131	34.760	27.825	1454.3
306.8	303.9	0.15	29.126	34.762	27.826	1454.3
306.8	303.9	0.15	29.126	34.760	27.825	1454.3

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
5	X		231	1554	Ship	71 33.9	133 59.5
6	X		232	0945	Ship	71 18.9	134 0.0



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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1.4	1.4	-1.43	23.704	29.359	23.621	1434.8
1.4	1.4	-1.41	23.698	29.315	23.598	1434.8
1.8	1.9	-1.47	23.852	29.328	23.597	1434.8
5.7	5.8	-1.45	23.690	29.352	23.616	1434.8
11.8	11.8	-1.47	23.704	28.386	23.644	1434.8
18.3	18.2	-1.33	24.123	28.804	23.978	1436.2
24.8	24.7	-1.09	25.025	30.802	24.781	1438.8
31.5	31.3	-1.19	25.216	31.150	25.085	1438.8
38.1	37.8	-1.36	25.175	31.263	25.160	1438.3
44.9	44.7	-1.36	25.384	31.552	25.394	1438.8
51.8	51.5	-1.34	25.845	31.883	25.661	1439.4
58.6	58.3	-1.37	25.749	32.046	25.794	1439.6
65.4	65.0	-1.38	25.816	32.152	25.880	1439.6
72.1	71.6	-1.40	25.879	32.247	25.957	1440.0
78.9	78.4	-1.41	25.927	32.325	26.020	1440.1
85.8	85.3	-1.42	25.976	32.403	26.084	1440.3
92.8	92.2	-1.42	26.038	32.474	26.142	1440.5
99.5	98.9	-1.44	26.095	32.571	26.220	1440.7
106.3	105.6	-1.46	26.168	32.689	26.317	1440.8
113.3	112.5	-1.47	26.203	32.747	26.384	1441.0
120.2	119.4	-1.49	26.254	32.834	26.435	1441.1
127.1	126.2	-1.50	26.304	32.912	26.498	1441.3
133.8	132.8	-1.51	26.347	32.974	26.540	1441.4
140.6	139.7	-1.52	26.372	33.021	26.587	1441.5
147.5	146.5	-1.54	26.424	33.104	26.654	1441.7
154.4	153.3	-1.57	26.459	33.183	26.710	1441.8
161.0	159.8	-1.58	26.496	33.223	26.754	1441.9
168.7	165.5	-1.56	26.543	33.289	26.805	1442.1
173.1	171.8	-1.55	26.603	33.353	26.857	1442.4
179.5	178.2	-1.51	26.682	33.406	26.898	1442.8
185.8	184.4	-1.46	26.765	33.472	26.851	1443.1
192.1	190.7	-1.41	26.876	33.581	27.021	1443.6
197.6	188.1	-1.37	26.958	33.628	27.074	1444.0
203.6	202.3	-1.31	27.088	33.725	27.151	1444.5
210.3	209.5	-1.23	27.232	33.822	27.227	1445.2
216.5	214.8	-1.10	27.437	33.861	27.336	1446.0
222.7	220.9	-1.00	27.584	34.051	27.404	1446.7
228.1	226.3	-0.89	27.762	34.157	27.486	1447.5
234.5	233.6	-0.79	27.920	34.256	27.562	1448.2
240.7	238.7	-0.70	28.054	34.332	27.821	1448.8
246.9	244.8	-0.65	28.143	34.393	27.868	1449.2
253.3	251.2	-0.57	28.261	34.456	27.715	1449.8
258.6	256.5	-0.45	28.397	34.501	27.746	1450.5
264.0	261.8	-0.37	28.504	34.550	27.782	1451.0
269.3	267.0	-0.31	28.582	34.587	27.809	1451.4
274.7	272.4	-0.25	28.652	34.609	27.824	1451.8
280.1	277.8	-0.21	28.705	34.631	27.840	1452.1
285.8	283.3	-0.19	28.746	34.653	27.856	1452.3
291.4	288.8	-0.15	28.788	34.670	27.887	1452.8
296.7	294.1	-0.09	28.880	34.887	27.879	1453.0
301.9	299.3	-0.05	28.910	34.702	27.888	1453.3

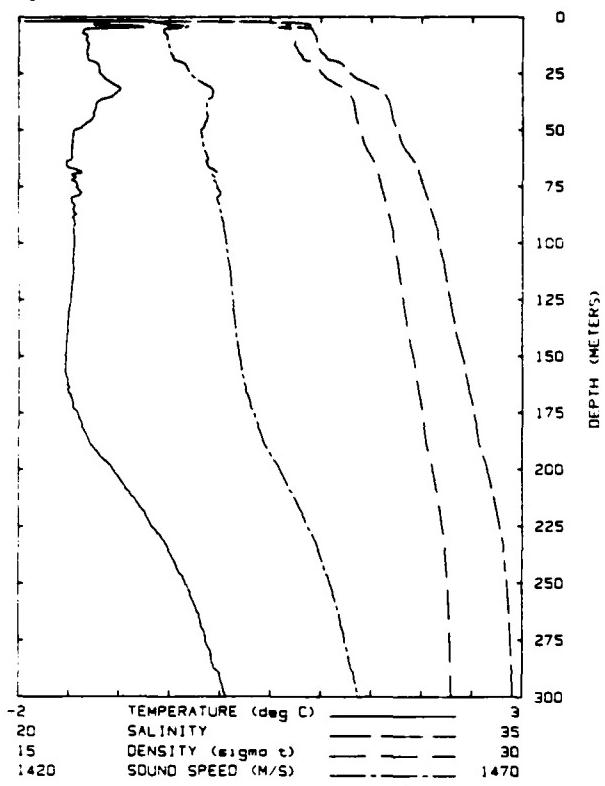
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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2.2	2.2	-1.47	23.280	28.782	23.183	1433.8
6.7	6.7	-1.47	23.470	29.074	23.382	1434.3
12.2	12.1	-1.48	23.512	29.119	23.428	1434.5
17.6	17.5	-1.43	23.549	29.137	23.442	1434.8
23.0	22.9	-1.35	23.746	29.321	23.589	1435.5
29.3	29.1	-1.14	24.589	30.243	24.331	1437.8
35.3	35.1	-1.13	25.203	31.083	24.983	1439.1
41.3	41.1	-1.28	25.188	31.197	25.105	1438.7
47.4	47.1	-1.37	25.288	31.433	25.288	1438.6
53.5	53.2	-1.42	25.403	31.831	25.459	1438.8
59.2	58.8	-1.42	25.581	31.841	25.629	1439.1
64.7	64.4	-1.40	25.705	32.017	25.771	1439.6
70.8	70.3	-1.40	25.819	32.165	25.891	1439.8
76.9	76.4	-1.41	25.888	32.283	25.988	1440.1
83.0	82.5	-1.42	25.971	32.394	26.077	1440.2
88.7	88.2	-1.43	26.022	32.475	26.143	1440.4
94.3	93.7	-1.44	26.075	32.554	26.207	1440.5
100.4	99.7	-1.45	26.122	32.630	26.269	1440.7
106.4	105.7	-1.48	26.155	32.695	26.321	1440.8
112.4	111.7	-1.49	26.197	32.762	26.377	1440.9
118.1	117.3	-1.51	26.240	32.827	26.438	1441.0
123.6	122.7	-1.51	26.285	32.899	26.488	1441.2
129.6	128.7	-1.52	26.324	32.960	26.538	1441.3
135.7	134.7	-1.53	26.371	33.032	26.588	1441.4
141.7	140.7	-1.56	26.394	33.092	26.645	1441.5
147.4	146.3	-1.58	26.425	33.136	26.681	1441.6
152.8	151.7	-1.57	26.441	33.181	26.701	1441.7
158.9	157.8	-1.57	26.493	33.233	26.760	1441.9
165.1	163.9	-1.57	26.541	33.298	26.812	1442.0
171.6	170.3	-1.58	26.584	33.351	26.855	1442.3
177.7	176.3	-1.53	26.683	33.404	26.897	1442.8
183.4	182.0	-1.50	26.735	33.468	26.949	1442.9
189.9	188.5	-1.48	26.821	33.537	27.003	1443.3
196.3	194.8	-1.39	26.958	33.648	27.081	1443.9
202.7	201.1	-1.28	27.120	33.744	27.188	1444.6
208.7	207.1	-1.19	27.295	33.879	27.272	1445.3
214.5	212.9	-1.13	27.412	33.958	27.334	1445.8
221.1	219.3	-1.00	27.486	34.023	27.438	1446.7
227.5	225.5	-0.92	27.724	34.142	27.475	1447.3
234.0	232.1	-0.83	27.885	34.231	27.544	1447.9
240.1	238.2	-0.78	27.914	34.208	27.522	1448.3
246.1	244.1	-0.87	28.084	34.340	27.825	1449.0
252.9	250.0	-0.57	28.284	34.455	27.714	1449.8
259.1	257.0	-0.47	28.355	34.481	27.719	1450.3
264.9	262.7	-0.40	28.444	34.498	27.741	1450.8
270.8	268.5	-0.34	28.550	34.588	27.795	1451.3
276.5	274.1	-0.28	28.587	34.548	27.775	1451.8
282.5	280.1	-0.20	28.653	34.545	27.770	1452.1
288.3	285.9	-0.18	28.707	34.587	27.802	1452.3
294.0	291.5	-0.13	28.748	34.595	27.798	1452.6
299.5	298.9	-0.07	28.798	34.577	27.799	1453.0
304.6	301.8	-0.00	28.981	34.718	27.898	1453.6

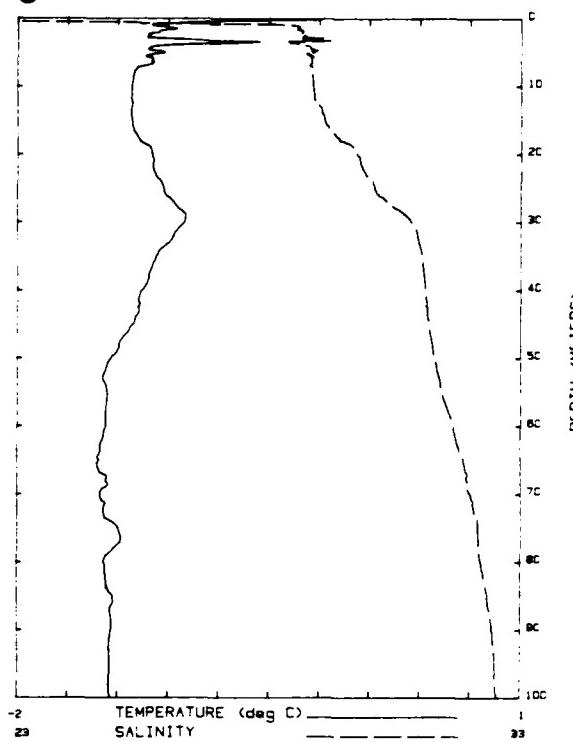
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
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7	X		233	0147	Ship	71	8.2
8	X		233	0214	Ship	71	8.2

7



8



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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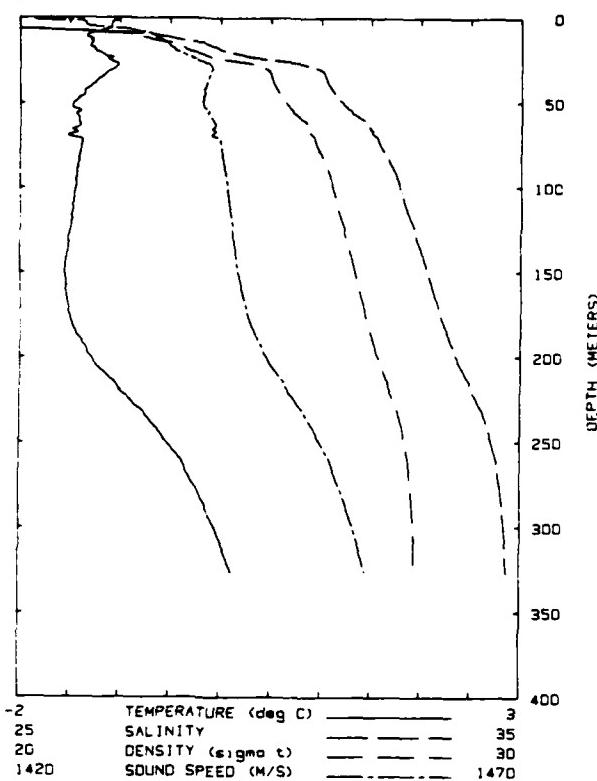
1.7	1.7	-0.88	18.622	22.149	17.707	1427.7
1.7	1.7	-0.96	19.182	22.934	18.429	1420.4
1.8	1.8	-0.90	18.068	21.443	17.227	1426.7
1.8	1.8	-0.89	18.951	19.889	15.980	1425.8
1.9	1.9	-0.88	18.771	19.633	15.789	1425.3
3.9	3.9	-1.19	23.351	20.850	23.045	1435.0
9.2	9.2	-1.31	23.418	20.854	23.212	1434.8
14.4	14.3	-1.32	23.493	20.953	23.292	1435.0
19.4	19.3	-1.30	23.718	20.238	23.522	1435.5
24.5	24.3	-1.19	24.232	20.819	23.989	1437.0
29.6	29.6	-1.07	24.732	20.368	24.430	1438.4
35.7	35.5	-1.08	25.159	20.955	24.905	1439.2
41.7	41.5	-1.24	25.137	21.089	25.017	1438.7
47.6	47.3	-1.33	25.147	21.193	25.103	1438.5
53.1	52.8	-1.46	25.181	21.339	25.224	1438.2
58.6	58.2	-1.46	25.259	21.479	25.337	1436.4
64.5	64.2	-1.53	25.415	21.758	25.583	1438.6
70.5	70.1	-1.40	25.588	21.934	25.708	1439.2
76.4	75.9	-1.42	25.740	22.077	25.820	1439.7
81.9	81.4	-1.47	25.769	22.195	25.917	1439.7
87.3	86.7	-1.45	25.895	22.314	26.012	1440.1
93.2	92.6	-1.45	25.983	22.437	26.112	1440.3
99.1	98.5	-1.44	26.042	22.503	26.186	1440.8
105.0	104.3	-1.45	26.094	22.584	26.231	1440.7
110.5	109.8	-1.46	26.153	22.668	26.298	1440.9
115.0	115.1	-1.46	26.195	22.728	26.348	1441.0
121.0	120.0	-1.46	26.234	22.784	26.402	1441.1
127.7	126.8	-1.49	26.283	22.887	26.482	1441.3
133.5	132.8	-1.51	26.332	22.952	26.531	1441.4
139.0	138.0	-1.51	26.376	23.020	26.586	1441.6
144.4	143.4	-1.52	26.428	23.097	26.646	1441.7
150.2	149.2	-1.53	26.499	23.201	26.733	1441.9
156.2	155.0	-1.53	26.571	23.287	26.811	1442.1
162.0	160.8	-1.51	26.635	23.358	26.880	1442.4
167.5	166.3	-1.50	26.692	23.428	26.914	1442.8
172.8	171.5	-1.48	26.788	23.515	26.985	1443.0
178.6	177.2	-1.40	26.894	23.580	27.038	1443.5
184.5	183.1	-1.34	27.006	23.664	27.103	1444.0
190.3	188.8	-1.28	27.101	23.724	27.148	1444.4
195.7	194.2	-1.19	27.265	23.836	27.237	1445.1
201.0	199.5	-1.07	27.440	23.952	27.327	1445.9
206.8	205.2	-0.98	27.593	24.043	27.397	1446.5
212.7	211.0	-0.89	27.733	24.127	27.482	1447.2
218.5	216.8	-0.78	27.886	24.218	27.531	1447.9
223.9	222.2	-0.71	28.005	24.285	27.583	1448.4
229.4	227.6	-0.63	28.129	24.357	27.637	1449.0
234.8	233.0	-0.54	28.261	24.429	27.692	1449.6
239.9	238.0	-0.48	28.342	24.487	27.718	1450.0
245.0	243.0	-0.42	28.416	24.503	27.747	1450.4
250.2	248.1	-0.36	28.501	24.540	27.773	1450.8
255.5	253.4	-0.30	28.581	24.578	27.800	1451.2
260.6	258.6	-0.28	28.630	24.584	27.812	1451.5
266.0	263.0	-0.20	28.700	24.620	27.830	1451.9
271.4	269.1	-0.18	28.728	24.630	27.837	1452.1
277.1	274.7	-0.14	28.780	24.646	27.850	1452.4
282.5	280.1	-0.09	28.839	24.689	27.885	1452.7
287.9	285.4	-0.07	28.889	24.884	27.875	1452.9
293.2	290.7	0.00	28.952	24.708	27.881	1453.4
298.0	296.0	0.03	28.891	24.721	27.900	1453.6

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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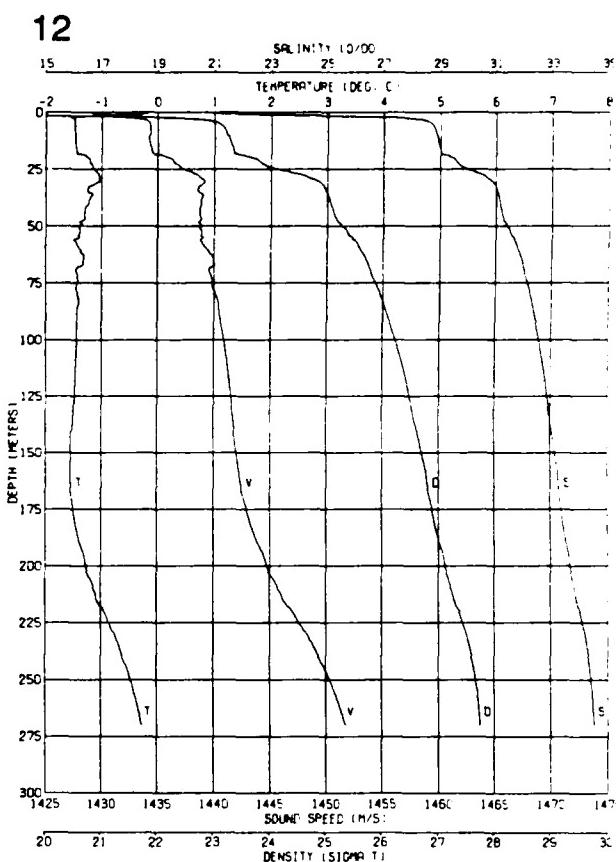
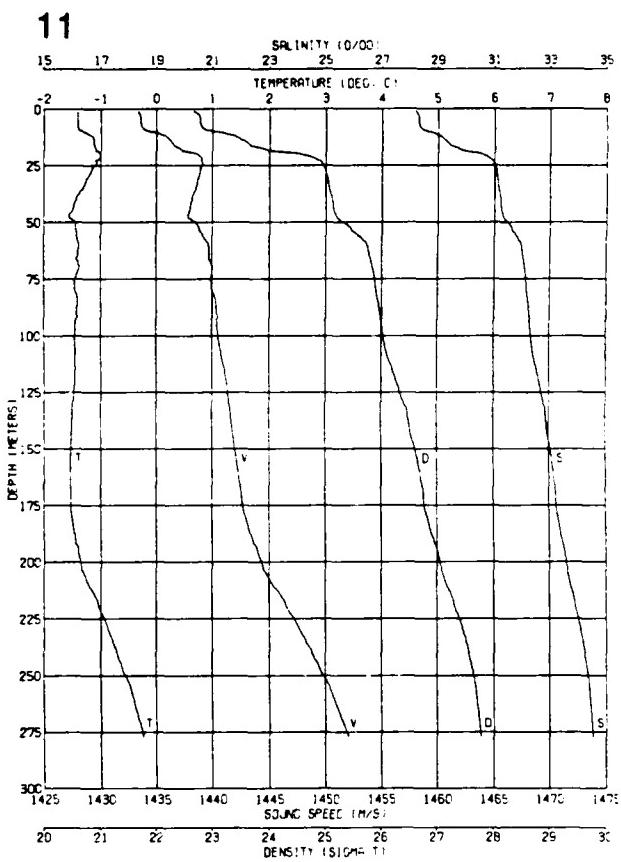
2.2	2.2	-0.88	18.878	22.318	17.833	1429.0
2.7	2.7	-1.18	22.768	22.840	22.380	1434.1
3.5	3.5	-1.08	23.387	22.548	22.861	1435.5
4.7	4.8	-1.21	23.347	22.659	23.053	1435.0
6.4	6.4	-1.22	23.483	22.827	23.189	1435.2
7.8	7.8	-1.19	23.501	22.847	23.204	1435.4
9.5	9.4	-1.28	23.446	22.889	23.224	1434.9
11.1	11.0	-1.31	23.433	22.871	23.225	1434.9
12.7	12.6	-1.32	23.444	22.893	23.243	1434.9
14.2	14.2	-1.32	23.485	22.842	23.283	1435.0
16.0	15.9	-1.32	23.585	22.057	23.376	1435.1
17.6	17.5	-1.32	23.627	23.133	23.437	1435.3
19.2	19.1	-1.29	23.785	23.316	23.585	1435.7
20.9	20.8	-1.21	24.098	23.884	23.884	1436.6
22.6	22.5	-1.19	24.215	28.800	23.974	1436.9
24.3	24.2	-1.19	24.269	29.870	24.031	1437.1
26.1	26.0	-1.14	24.452	30.069	24.190	1437.5
27.8	27.7	-1.12	24.532	30.154	24.258	1437.8
29.7	29.5	-1.05	24.802	30.445	24.492	1438.5
31.5	31.4	-1.00	25.081	30.785	24.766	1439.3
33.2	33.1	-1.05	25.183	30.930	24.883	1439.3
35.1	34.9	-1.10	25.184	30.980	24.925	1439.1
36.8	36.6	-1.17	25.155	31.039	24.974	1438.9
38.6	38.4	-1.20	25.150	31.065	24.987	1438.8
40.4	40.2	-1.22	25.154	31.092	25.019	1438.8
42.2	42.0	-1.28	25.138	31.110	25.035	1438.6
44.1	43.8	-1.27	25.152	31.141	25.059	1438.6
45.9	45.6	-1.29	25.155	31.158	25.074	1438.6
47.6	47.3	-1.33	25.153	31.186	25.105	1438.5
49.5	49.2	-1.38	25.141	31.230	25.138	1438.3
51.3	51.0	-1.41	25.149	31.274	25.170	1438.3
53.0	52.7	-1.48	25.145	31.325	25.212	1438.1
54.9	54.6	-1.48	25.165	31.380	25.257	1438.1
56.7	56.4	-1.47	25.217	31.428	25.294	1438.3
58.5	58.2	-1.47	25.283	31.468	25.344	1438.4
60.3	59.9	-1.47	25.322	31.574	25.414	1438.5
62.1	61.7	-1.47	25.388	31.683	25.488	1438.7
63.9	63.6	-1.49	25.419	31.720	25.533	1438.7
65.7	65.3	-1.50	25.458	31.787	25.587	1438.8
67.6	67.2	-1.52	25.504	31.889	25.654	1438.8
69.4	69.0	-1.48	25.588	31.958	25.724	1439.1
71.2	70.8	-1.47	25.594	31.933	25.704	1439.2
73.0	72.6	-1.50	25.830	32.027	25.781	1439.2
74.9	74.4	-1.48	25.885	32.076	25.821	1439.4
76.7	76.2	-1.42	25.795	32.153	25.882	1439.8
78.5	78.0	-1.30	25.830	32.162	25.888	1440.0
80.3	79.8	-1.42	25.810	32.179	25.903	1439.8
82.2	81.7	-1.40	25.791	32.214	25.932	1439.7
83.9	83.4	-1.47	25.832	32.281	25.970	1439.8
85.8	85.2	-1.46	25.876	32.308	26.008	1440.0
87.6	87.0	-1.43	25.932	32.344	26.036	1440.2
89.4	88.8	-1.44	25.950	32.387	26.071	1440.2
91.2	90.7	-1.44	25.988	32.427	26.104	1440.3
93.1	92.5	-1.44	26.001	32.453	26.125	1440.4
94.8	94.2	-1.45	26.016	32.473	26.141	1440.4
96.7	96.1	-1.45	26.027	32.492	26.157	1440.5
98.6	97.9	-1.45	26.035	32.503	26.165	1440.5
100.3	99.7	-1.45	26.043	32.514	26.175	1440.5

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
9	X		233	1223	Ship	70 59.8	135 19.2
10	X		233	2145	Ship	70 53.8	135 24.1

9



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
11		X	233	2230	HeLo	71 13.5	134 19.0
12		X	233	2300	HeLo	71 29.5	134 15.0



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

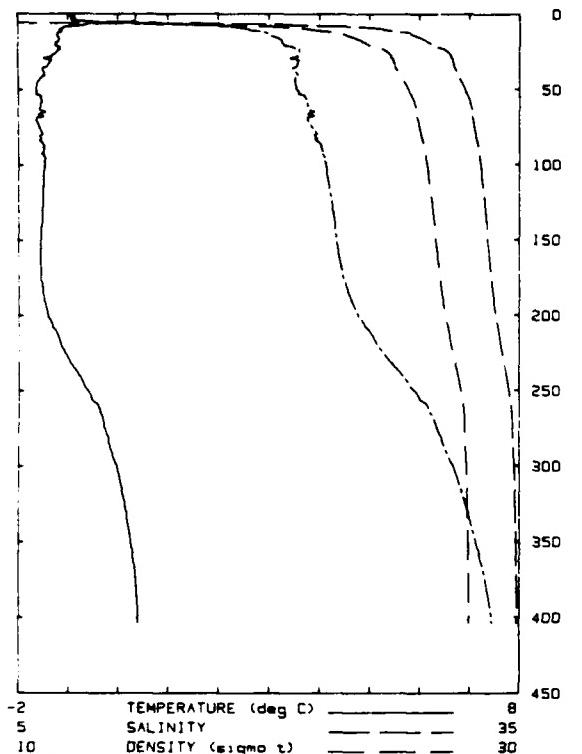
DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.4	-1.40	1433.6	22.78	28.31
10.1	-1.29	1434.5	23.04	28.64
15.1	-1.12	1436.4	23.62	29.36
20.3	-1.00	1438.7	24.59	30.56
25.1	-1.12	1439.0	24.97	31.03
30.2	-1.23	1438.8	25.03	31.10
35.1	-1.31	1438.5	25.06	31.14
40.1	-1.43	1438.2	25.12	31.21
45.5	-1.51	1437.9	25.16	31.25
50.0	-1.44	1438.5	25.33	31.47
55.3	-1.41	1439.1	25.56	31.75
60.2	-1.38	1439.7	25.74	31.98
65.2	-1.41	1439.7	25.79	32.03
70.2	-1.37	1440.0	25.84	32.10
75.1	-1.45	1439.9	25.88	32.14
80.3	-1.44	1440.0	25.90	32.17
85.0	-1.41	1440.3	25.94	32.22
90.2	-1.42	1440.4	25.97	32.26
95.1	-1.44	1440.4	26.01	32.30
100.2	-1.45	1440.5	26.04	32.34
110.3	-1.45	1440.9	26.13	32.46
120.0	-1.45	1441.2	26.27	32.63
130.0	-1.49	1441.5	26.42	32.81
140.1	-1.51	1441.7	26.51	32.93
150.2	-1.52	1442.0	26.61	33.05
160.2	-1.53	1442.3	26.70	33.15
170.4	-1.52	1442.6	26.77	33.24
180.0	-1.50	1442.9	26.83	33.32
190.4	-1.44	1443.6	26.94	33.46
200.2	-1.35	1444.3	27.04	33.59
210.3	-1.20	1445.4	27.17	33.76
220.1	-1.03	1446.6	27.31	33.93
230.2	-0.87	1447.7	27.44	34.10
243.5	-0.70	1448.9	27.56	34.25
250.3	-0.55	1449.9	27.65	34.37
260.1	-0.42	1450.8	27.70	34.44
270.4	-0.30	1451.6	27.74	34.50
277.2	-0.23	1452.1	27.76	34.52

5.1	-1.49	1434.3	23.09	28.70
10.1	-1.48	1434.3	23.21	28.85
15.1	-1.47	1434.4	23.31	28.97
20.1	-1.24	1436.1	23.71	29.47
25.1	-1.14	1437.4	24.16	30.03
30.2	-1.03	1439.2	24.82	30.85
35.0	-1.25	1438.6	24.99	31.05
40.1	-1.24	1438.9	25.06	31.14
45.1	-1.32	1438.7	25.13	31.22
50.3	-1.41	1438.7	25.29	31.42
55.3	-1.39	1439.1	25.46	31.63
60.1	-1.39	1439.4	25.59	31.80
65.2	-1.33	1439.9	25.72	31.95
70.3	-1.46	1439.6	25.79	32.03
75.4	-1.45	1439.9	25.88	32.15
80.5	-1.44	1440.1	25.96	32.25
85.0	-1.42	1440.4	26.02	32.33
90.3	-1.45	1440.5	26.09	32.41
95.3	-1.44	1440.7	26.16	32.49
100.4	-1.45	1440.9	26.23	32.58
110.3	-1.47	1441.1	26.34	32.71
120.0	-1.49	1441.4	26.43	32.83
130.1	-1.51	1441.6	26.52	32.93
140.1	-1.53	1441.8	26.61	33.04
150.1	-1.56	1442.0	26.69	33.15
160.1	-1.56	1442.3	26.78	33.25
170.4	-1.53	1442.7	26.85	33.34
180.4	-1.47	1443.2	26.92	33.43
190.0	-1.39	1443.9	27.01	33.55
200.2	-1.28	1444.8	27.11	33.68
210.1	-1.14	1445.8	27.23	33.82
220.3	-0.93	1447.1	27.37	34.01
230.1	-0.75	1448.4	27.51	34.19
240.5	-0.61	1449.4	27.60	34.31
250.1	-0.47	1450.3	27.67	34.40
260.5	-0.35	1451.1	27.72	34.47
270.0	-0.27	1451.6	27.73	34.49
270.0	-0.27	1451.8	27.73	34.49

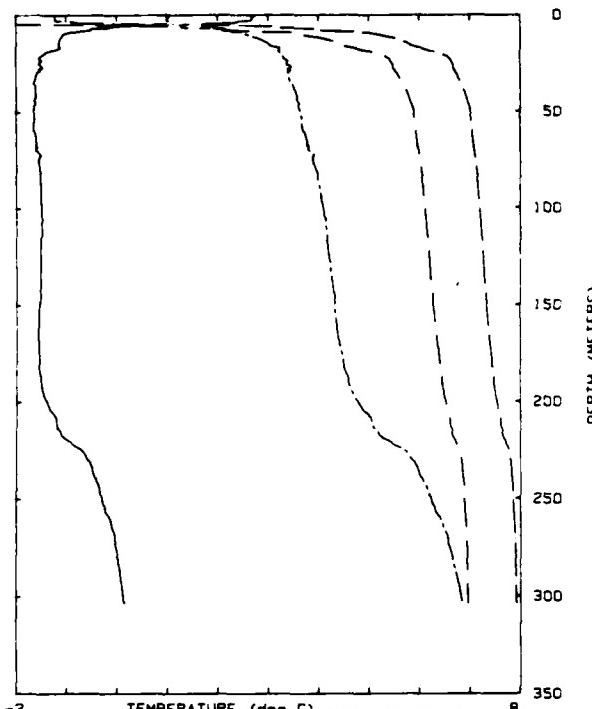
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
13	X		234	0444	Ship	70 31.1	136 16.1
14	X		234	0820	Ship	70 30.1	136 48.7

13



-2	TEMPERATURE (deg C)	8
5	SALINITY	35
10	DENSITY ( $\sigma_t$ )	30
1410	SOUND SPEED (m/s)	1460

14



-2	TEMPERATURE (deg C)	8
5	SALINITY	35
10	DENSITY ( $\sigma_t$ )	30
1410	SOUND SPEED (m/s)	1460

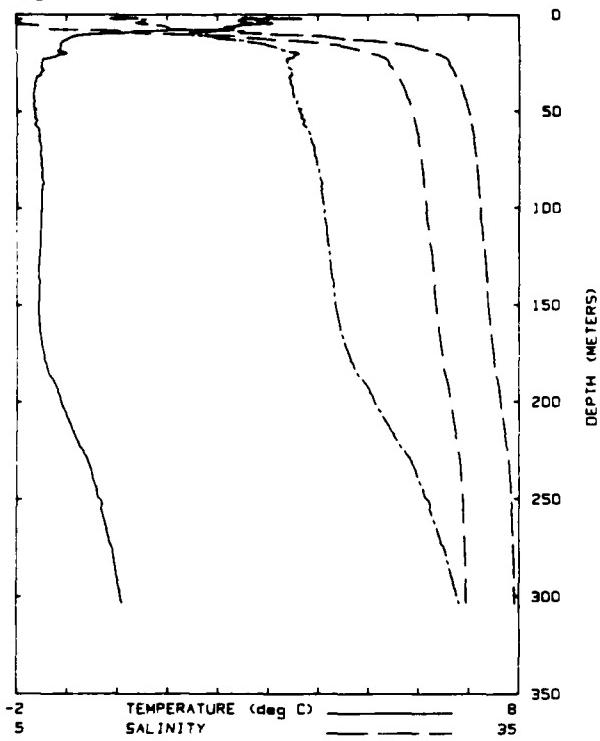
PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY (m/sec)
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1.8	1.8	0.35	7.892	8.411	6.742	1415.4
6.5	6.4	-0.07	12.154	13.576	10.896	1422.3
11.7	11.7	-1.16	22.438	27.393	22.029	1433.6
17.1	17.0	-1.18	23.778	29.200	23.489	1436.1
22.9	22.8	-1.19	24.583	30.291	24.371	1437.6
28.8	28.6	-1.32	24.940	30.914	24.877	1437.9
34.8	34.6	-1.40	25.000	31.078	25.011	1437.8
40.9	40.6	-1.48	25.140	31.341	25.226	1437.9
47.1	46.8	-1.63	25.212	31.598	25.436	1437.6
52.7	52.4	-1.64	25.348	31.795	25.597	1437.9
58.4	58.0	-1.52	25.602	32.015	25.772	1438.8
64.5	64.1	-1.52	25.719	32.170	25.998	1439.2
70.6	70.2	-1.63	25.674	32.225	25.944	1438.8
76.8	76.3	-1.56	25.799	32.309	26.011	1439.4
82.4	82.9	-1.55	25.883	32.417	26.098	1439.6
88.2	87.6	-1.48	26.000	32.499	26.163	1440.2
94.2	93.6	-1.48	26.066	32.586	26.233	1440.4
100.4	99.7	-1.48	26.115	32.645	26.281	1440.6
106.6	105.9	-1.50	26.167	32.731	26.351	1440.7
112.2	111.5	-1.49	26.211	32.782	26.392	1440.9
118.0	117.2	-1.51	26.245	32.844	26.443	1440.0
124.0	123.2	-1.51	26.289	32.900	26.495	1441.2
130.2	129.3	-1.52	26.315	32.952	26.531	1441.3
136.2	135.3	-1.52	26.358	33.006	26.575	1441.4
142.0	140.8	-1.54	26.375	33.043	26.605	1441.5
147.4	146.3	-1.55	26.392	33.078	26.634	1441.6
153.4	152.3	-1.55	26.435	33.135	26.680	1441.7
159.6	158.5	-1.56	26.474	33.191	26.726	1441.9
165.5	164.3	-1.56	26.503	33.224	26.752	1442.0
171.1	169.9	-1.55	26.544	33.271	26.790	1442.2
176.7	175.4	-1.56	26.572	33.311	26.823	1442.3
182.7	181.3	-1.52	26.630	33.362	26.863	1442.7
188.7	187.3	-1.50	26.709	33.420	26.916	1443.0
194.7	193.2	-1.45	26.806	33.508	26.979	1443.4
200.2	198.7	-1.42	26.888	33.578	27.035	1443.7
205.8	204.2	-1.34	27.014	33.666	27.104	1444.3
211.9	210.3	-1.26	27.161	33.783	27.180	1444.9
218.1	216.4	-1.19	27.273	33.833	27.235	1445.5
224.3	222.5	-1.11	27.406	33.928	27.309	1446.0
229.9	228.0	-1.02	27.546	34.018	27.379	1446.7
235.7	233.8	-0.91	27.736	34.138	27.471	1447.5
242.0	240.1	-0.78	27.827	34.250	27.557	1448.3
248.6	246.6	-0.88	28.087	34.346	27.830	1449.0
255.4	253.2	-0.55	28.259	34.433	27.886	1449.8
261.4	259.2	-0.41	28.454	34.527	27.765	1450.7
268.9	264.7	-0.36	28.512	34.545	27.778	1451.1
272.4	270.1	-0.30	28.594	34.583	27.805	1451.5
277.9	275.5	-0.25	28.654	34.608	27.823	1451.8
283.4	280.9	-0.19	28.719	34.624	27.833	1452.2
288.9	286.4	-0.17	28.756	34.842	27.847	1452.4
294.3	291.8	-0.12	28.816	34.863	27.861	1452.8
299.9	297.3	-0.07	28.885	34.880	27.880	1453.2
305.2	302.6	-0.02	28.941	34.704	27.888	1453.5

PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY (m/sec)
1.2	1.2	2.70	7.458	7.342	5.913	1425.1
1.2	1.2	2.69	7.458	7.345	5.916	1425.0
1.1	1.1	2.69	7.457	7.345	5.915	1425.0
1.0	1.0	2.68	7.458	7.346	5.917	1425.0
4.5	4.5	2.24	8.037	8.154	7.364	1425.4
10.9	10.9	-1.08	22.062	26.822	21.567	1433.2
17.0	16.9	-1.12	23.812	28.922	23.263	1435.9
22.7	22.6	-1.54	24.866	30.791	24.781	1436.6
29.3	29.1	-1.51	24.957	31.134	25.059	1437.3
35.4	35.2	-1.65	25.101	31.472	25.335	1437.2
42.0	41.7	-1.60	25.355	31.771	25.576	1437.9
48.7	48.4	-1.65	25.482	31.994	25.758	1438.2
55.4	55.0	-1.64	25.572	32.095	25.840	1438.4
62.1	61.7	-1.61	25.843	32.163	25.894	1438.7
67.9	67.5	-1.60	25.707	32.234	25.951	1438.9
88.5	88.1	-1.58	25.719	32.230	25.948	1439.0
88.6	88.2	-1.58	25.716	32.228	25.946	1438.8
88.1	87.7	-1.60	25.685	32.210	25.932	1438.9
73.0	72.6	-1.50	25.838	32.303	26.005	1439.0
75.2	74.8	-1.55	25.826	32.335	26.032	1439.4
81.2	80.7	-1.51	25.912	32.418	26.098	1439.9
87.0	86.4	-1.51	25.963	32.473	26.143	1440.0
93.1	92.5	-1.49	26.013	32.526	26.185	1440.2
99.7	99.1	-1.49	26.061	32.585	26.233	1440.4
106.2	105.5	-1.47	26.116	32.634	26.272	1440.7
112.8	112.0	-1.48	26.144	32.683	26.312	1440.8
118.9	118.1	-1.50	26.180	32.747	26.364	1440.9
125.1	124.2	-1.51	26.217	32.805	26.411	1441.0
131.7	130.8	-1.51	26.244	32.839	26.439	1441.2
138.3	137.3	-1.51	26.272	32.877	26.470	1441.3
144.8	143.8	-1.52	26.327	32.857	26.535	1441.5
150.6	149.5	-1.53	26.342	32.879	26.553	1441.6
156.7	155.6	-1.55	26.362	33.059	26.619	1441.7
163.3	162.1	-1.56	26.426	33.127	26.674	1441.8
169.8	168.5	-1.56	26.467	33.173	26.711	1442.0
176.3	175.0	-1.55	26.537	33.261	26.782	1442.3
181.7	180.4	-1.54	26.577	33.304	26.816	1442.5
188.1	186.7	-1.51	26.696	33.423	26.812	1442.6
194.6	193.2	-1.49	26.752	33.475	26.953	1443.2
201.1	199.5	-1.40	26.923	33.602	27.054	1443.9
207.4	205.8	-1.28	27.121	33.736	27.159	1444.7
213.2	211.5	-1.19	27.252	33.816	27.221	1445.3
219.9	218.1	-1.05	27.493	33.885	27.354	1446.3
226.6	224.8	-0.89	28.048	34.325	27.614	1448.6
233.1	231.2	-0.53	28.271	34.431	27.693	1449.6
238.7	236.8	-0.47	28.349	34.468	27.720	1450.0
244.4	242.4	-0.37	28.476	34.529	27.765	1450.6
250.0	248.3	-0.31	28.574	34.585	27.808	1451.1
256.3	254.2	-0.23	28.855	34.800	27.816	1451.6
262.4	260.2	-0.14	28.766	34.843	27.846	1452.1
268.6	266.3	-0.08	28.844	34.873	27.867	1452.5
274.6	272.3	-0.04	29.087	34.687	27.876	1452.9
280.9	278.5	0.00	28.950	34.708	27.891	1453.2
286.8	284.4	0.04	28.998	34.727	27.904	1453.5
293.0	290.5	0.08	28.042	34.737	27.911	1453.8
298.1	296.5	0.11	28.081	34.747	27.917	1454.0
304.9	302.2	0.13	28.106	34.757	27.923	1454.2
306.1	303.4	0.14	28.120	34.760	27.925	1454.3

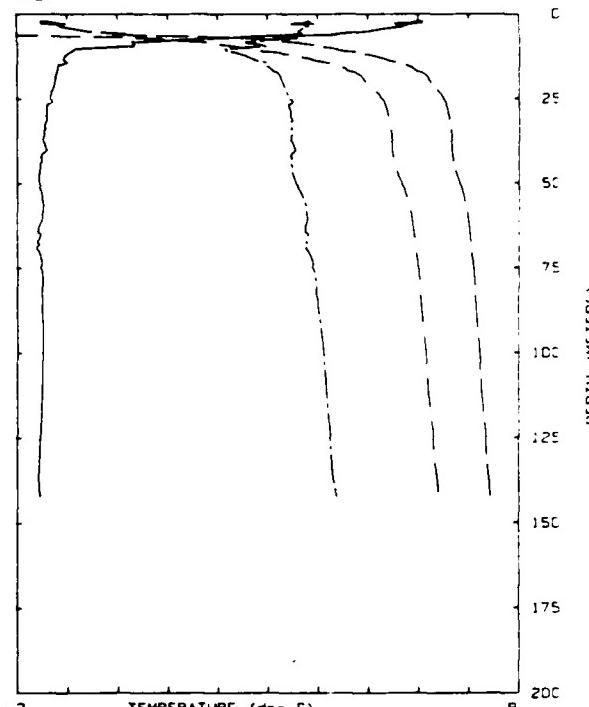
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
15	X		234	1150	Ship	70 21.2	137 59.3
16	X		234	1437	Ship	69 57.6	138 34.6

15



-2 TEMPERATURE (deg C) 8  
5 SALINITY 35  
10 DENSITY ( $\sigma_t$ ) 30  
1410 SOUND SPEED (m/s) 1460

16



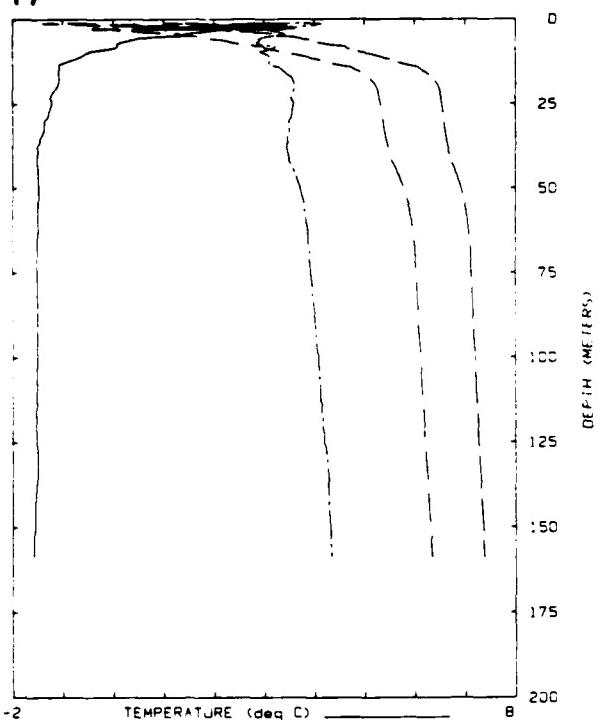
-2 TEMPERATURE (deg C) 8  
5 SALINITY 35  
10 DENSITY ( $\sigma_t$ ) 30  
1410 SOUND SPEED (m/s) 1460

PRESSURE dBar	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY m/sec
2.4	2.4	3.53	11.069	10.942	8.759	1433.6
2.4	2.4	3.01	12.191	12.344	8.898	1433.0
6.7	6.7	2.21	13.355	13.968	11.209	1431.6
12.2	12.2	-0.93	19.871	23.806	19.133	1429.9
18.4	18.3	-1.14	23.876	29.286	23.566	1436.4
25.6	25.5	-1.49	24.786	30.953	24.831	1436.9
32.7	32.5	-1.80	25.025	31.317	25.208	1437.1
39.9	39.7	-1.85	25.250	31.678	25.502	1437.5
46.7	46.4	-1.86	25.406	31.903	25.684	1437.8
53.9	53.6	-1.65	25.544	32.078	25.824	1438.2
60.8	60.5	-1.57	25.720	32.221	25.940	1439.0
67.9	67.5	-1.52	25.865	32.362	26.053	1439.5
74.8	74.3	-1.50	25.852	32.459	26.131	1439.8
81.7	81.2	-1.49	26.019	32.535	26.193	1440.1
88.6	88.1	-1.47	26.069	32.583	26.231	1440.3
95.4	94.8	-1.50	26.101	32.655	26.290	1440.4
102.8	102.0	-1.50	26.156	32.722	26.344	1440.6
109.3	108.6	-1.51	26.207	32.797	26.405	1440.8
116.4	115.6	-1.52	26.256	32.874	26.468	1441.0
123.1	122.2	-1.54	26.315	32.970	26.546	1441.1
130.3	129.4	-1.56	26.348	33.034	26.598	1441.2
137.2	136.3	-1.56	26.392	33.098	26.650	1441.4
144.2	143.1	-1.55	26.433	33.133	26.678	1441.6
150.8	149.8	-1.57	26.480	33.187	26.722	1441.7
158.0	156.9	-1.56	26.531	33.259	26.788	1442.0
165.0	163.8	-1.54	26.586	33.336	26.843	1442.3
171.8	170.5	-1.50	26.682	33.422	26.912	1442.7
178.9	177.6	-1.45	26.805	33.513	26.984	1443.2
186.1	184.7	-1.37	26.954	33.625	27.072	1443.6
193.0	191.5	-1.22	27.212	33.805	27.213	1444.9
199.8	199.3	-1.13	27.356	33.886	27.283	1445.5
207.2	205.6	-1.02	27.533	34.008	27.371	1446.3
213.9	212.3	-0.82	27.703	34.123	27.460	1447.0
221.3	219.5	-0.78	27.895	34.235	27.545	1447.9
228.3	228.5	-0.66	28.095	34.346	27.629	1448.8
234.4	232.5	-0.55	28.253	34.435	27.697	1449.5
240.1	238.1	-0.49	28.331	34.469	27.722	1449.9
246.0	244.0	-0.42	28.431	34.515	27.756	1450.6
252.1	250.0	-0.35	28.518	34.553	27.783	1450.9
257.6	255.7	-0.31	28.577	34.577	27.801	1451.2
263.9	261.7	-0.24	28.659	34.610	27.824	1451.7
270.2	267.9	-0.19	28.722	34.631	27.839	1452.0
276.4	274.0	-0.12	28.807	34.659	27.857	1452.5
282.4	280.0	-0.07	28.865	34.680	27.872	1452.8
288.3	285.8	-0.04	28.910	34.696	27.883	1453.1
294.5	292.0	-0.01	28.964	34.713	27.895	1453.4
300.9	298.3	0.06	28.025	34.731	27.906	1453.8
305.6	303.0	0.10	28.073	34.747	27.917	1454.1

PRESSURE dBar	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY m/sec
2.6	2.6	5.97	7.599	8.782	5.376	1435.0
2.0	2.0	6.07	7.331	8.506	5.154	1435.1
2.3	2.3	8.10	7.373	8.540	5.179	1435.3
7.1	7.1	2.32	17.451	18.608	14.805	1438.1
13.0	12.9	-1.06	21.986	26.702	21.471	1433.2
19.3	19.2	-1.24	24.025	29.593	23.807	1436.3
25.7	25.6	-1.30	24.710	30.578	24.605	1437.5
32.0	31.8	-1.43	24.828	30.870	24.843	1437.3
38.6	38.3	-1.45	24.918	31.014	24.960	1437.5
45.1	44.9	-1.54	24.954	31.152	25.074	1437.6
51.0	50.7	-1.54	25.229	31.522	25.373	1438.0
57.4	57.1	-1.49	25.509	31.847	25.436	1438.6
63.7	63.4	-1.58	25.985	32.059	25.809	1438.7
70.0	69.5	-1.61	25.660	32.178	25.906	1438.9
76.4	75.9	-1.51	25.439	32.313	26.013	1439.6
82.4	81.6	-1.50	25.914	32.401	26.084	1439.9
88.6	88.1	-1.50	25.979	32.487	26.154	1441.1
94.3	93.7	-1.49	26.050	32.571	26.222	1441.3
100.5	99.8	-1.50	28.115	32.664	26.297	1441.5
106.1	105.4	-1.50	28.164	32.728	26.349	1441.7
111.0	111.1	-1.50	26.198	32.760	26.391	1441.8
117.5	116.7	-1.52	26.256	32.872	26.466	1441.9
123.2	122.3	-1.54	28.332	32.991	26.563	1441.2
128.7	127.8	-1.53	28.372	33.059	26.618	1441.3
134.1	133.2	-1.57	26.413	33.131	26.677	1441.4
139.7	138.6	-1.57	26.300	33.248	26.772	1441.6
143.3	142.3	-1.55	26.547	33.295	26.809	1441.8
142.3	141.3	-1.58	26.530	33.277	26.795	1441.7

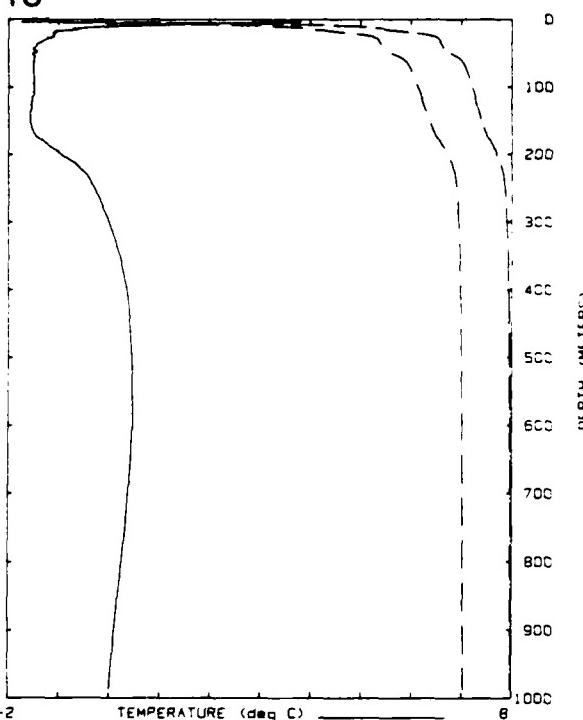
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
17	X		234	1810	Ship	70 13.9	140 4.6
18	X		234	2101	Ship	70 37.7	139 56.0

17



-2	TEMPERATURE (deg C)	8
5	SALINITY	35
10	DENSITY ( $\sigma_t$ )	30
1410	SOUND SPEED (m/s)	1460

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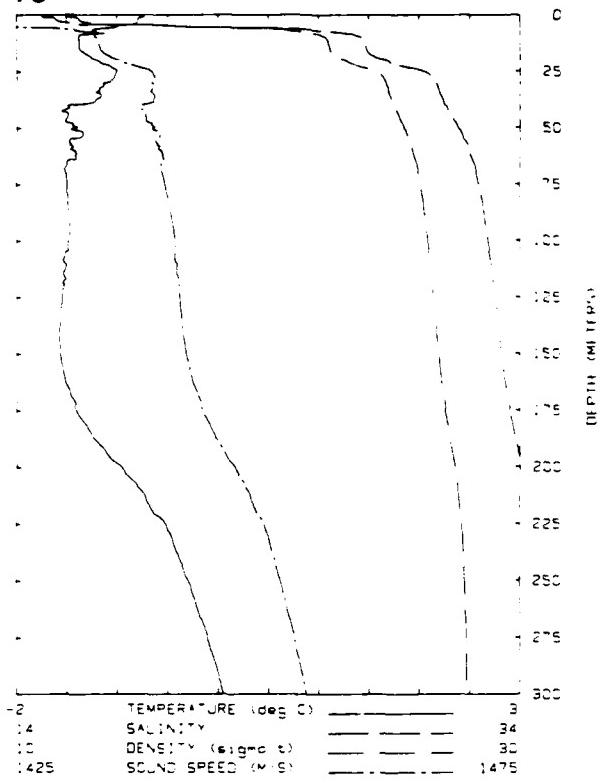
-2	TEMPERATURE (deg C)	8
5	SALINITY	35
10	DENSITY ( $\sigma_t$ )	30
1410	SOUND SPEED (m/s)	1510

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY (m/sec)
1.9	1.9	2.17	16.396	17.468	14.002	1435.9
5.2	5.1	1.07	16.768	20.956	16.816	1435.4
9.1	8.1	-0.13	21.510	25.282	20.312	1435.6
15.1	15.0	-1.07	23.985	29.371	23.825	1436.8
21.0	20.9	-1.15	24.748	30.478	24.521	1438.0
27.8	27.4	-1.27	24.820	30.895	24.699	1437.8
34.1	33.9	-1.40	24.838	30.849	24.626	1437.5
40.7	40.5	-1.50	24.856	31.114	25.043	1437.5
46.0	46.5	-1.49	25.285	31.549	25.394	1438.2
52.0	52.3	-1.48	25.521	31.858	25.644	1438.8
58.7	58.3	-1.49	25.689	32.109	25.848	1439.2
64.7	64.3	-1.50	25.781	32.244	25.957	1439.4
70.6	70.1	-1.51	25.838	32.321	26.020	1439.5
76.3	75.8	-1.51	25.883	32.374	26.063	1439.7
82.1	81.6	-1.52	25.913	32.418	26.098	1439.8
87.1	86.5	-1.50	25.956	32.462	26.132	1440.0
92.0	92.2	-1.51	25.992	32.513	26.175	1440.1
98.2	97.6	-1.52	26.033	32.577	26.227	1440.3
103.6	103.0	-1.52	26.071	32.624	26.265	1440.4
108.7	108.0	-1.51	26.106	32.660	26.294	1440.6
114.2	113.4	-1.52	26.138	32.718	26.341	1440.7
119.7	118.9	-1.52	26.183	32.773	26.386	1440.9
125.1	124.3	-1.52	26.210	32.812	26.418	1441.0
130.7	129.8	-1.49	26.281	32.869	26.463	1441.3
135.8	134.8	-1.50	26.317	32.924	26.508	1441.4
140.9	139.9	-1.53	26.337	32.977	26.552	1441.5
146.2	145.2	-1.55	26.358	33.031	26.595	1441.5
151.4	150.3	-1.56	26.380	33.081	26.636	1441.6
156.3	155.2	-1.57	26.411	33.120	26.669	1441.7
159.8	158.4	-1.58	26.435	33.158	26.699	1441.8

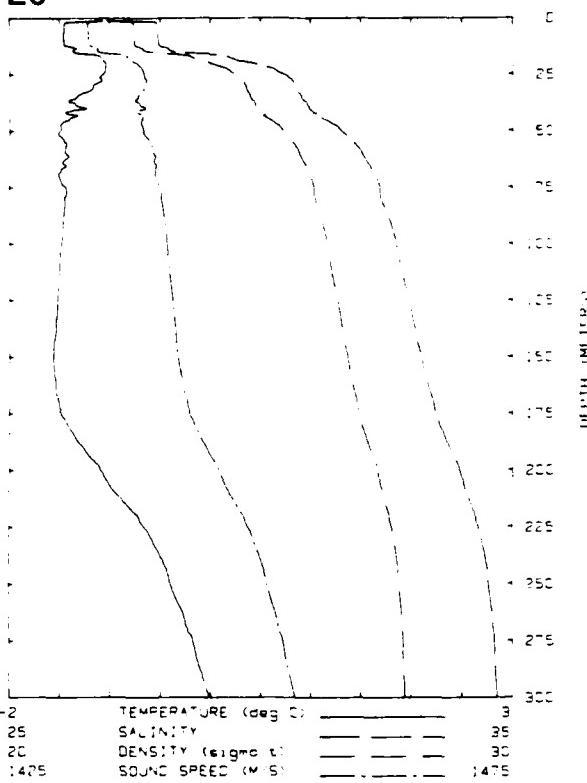
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY (m/sec)
4.0	3.9	3.82	7.882	7.525	6.045	1431.5
9.1	8.1	0.97	21.114	23.801	19.175	1438.9
14.1	14.1	-0.72	22.531	27.116	21.799	1435.4
19.0	18.9	-1.05	23.391	28.555	22.066	1435.8
24.3	24.1	-1.12	24.500	30.113	24.225	1437.7
30.1	30.0	-1.22	24.828	30.857	24.667	1438.0
35.0	35.8	-1.36	24.823	30.787	24.775	1437.6
41.7	41.5	-1.45	24.845	30.906	24.873	1437.4
47.1	46.8	-1.49	24.897	31.154	25.074	1437.7
53.0	52.7	-1.52	25.240	31.515	25.368	1438.1
57.0	56.7	-1.47	25.482	31.780	25.589	1438.8
63.5	63.1	-1.50	25.657	32.061	25.809	1439.1
69.6	69.2	-1.51	25.759	32.205	25.926	1439.4
75.3	74.9	-1.50	25.833	32.294	25.997	1439.6
81.2	81.2	-1.50	25.912	32.395	26.079	1439.9
88.2	87.6	-1.49	25.980	32.477	26.145	1440.1
94.6	94.0	-1.50	26.024	32.546	26.201	1440.3
100.7	100.0	-1.48	26.091	32.618	26.259	1440.5
106.4	105.7	-1.49	26.145	32.699	26.326	1440.7
112.8	112.0	-1.50	26.195	32.766	26.380	1440.9
119.2	118.4	-1.52	26.230	32.838	26.438	1440.9
125.5	124.6	-1.53	26.262	32.890	26.481	1441.1
131.7	130.8	-1.55	26.303	32.959	26.538	1441.2
137.3	136.3	-1.56	26.354	33.039	26.603	1441.3
143.7	142.7	-1.57	26.390	33.108	26.658	1441.5
150.1	149.0	-1.56	26.451	33.170	26.708	1441.7
156.4	155.3	-1.56	26.525	33.261	26.782	1441.9
162.5	161.3	-1.54	26.594	33.332	26.839	1442.2
168.2	167.0	-1.51	26.666	33.419	26.908	1442.6
174.5	173.2	-1.46	26.791	33.505	26.980	1443.0
180.6	179.3	-1.32	27.052	33.700	27.131	1444.1
186.5	185.1	-1.24	27.180	33.786	27.207	1444.7
192.5	191.0	-1.11	27.381	33.825	27.307	1445.5
198.3	196.7	-0.99	27.573	34.038	27.394	1446.3
204.5	203.0	-0.90	27.720	34.128	27.483	1447.0
211.1	209.5	-0.74	27.853	34.264	27.567	1448.0
217.7	216.0	-0.63	28.122	34.381	27.641	1448.8
223.6	221.8	-0.56	28.228	34.418	27.684	1449.3
229.0	227.2	-0.47	28.348	34.480	27.730	1449.8
234.5	232.8	-0.42	28.428	34.518	27.757	1450.2
239.9	238.0	-0.37	28.490	34.548	27.780	1450.6
245.2	243.2	-0.35	28.527	34.563	27.791	1450.8
250.6	248.5	-0.30	28.587	34.588	27.809	1451.1
255.8	253.7	-0.27	28.628	34.603	27.820	1451.4
261.7	259.8	-0.23	28.673	34.622	27.833	1451.7
267.0	265.6	-0.19	28.728	34.641	27.846	1452.0
274.2	271.8	-0.16	28.767	34.655	27.856	1452.3
280.7	278.3	-0.12	28.812	34.670	27.867	1452.5
286.4	284.0	-0.09	28.852	34.683	27.875	1452.8
292.0	289.5	-0.06	28.894	34.695	27.884	1453.1
297.4	294.8	-0.02	29.934	34.707	27.893	1453.3
302.8	300.2	0.00	29.963	34.716	27.898	1453.5
308.0	305.3	0.02	29.990	34.724	27.902	1453.7

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
19	X		235	0240	Ship	71 1.9	140 0.8
20	X		235	1723	Ship	71 17.0	140 12.0

19



20

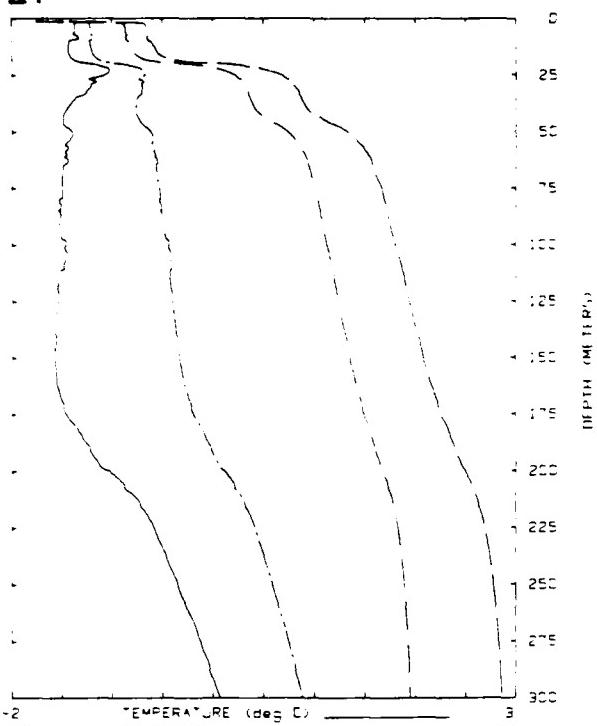


PRESSURE (dbar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	_SOUND VELOCITY (m/sec)
0.0	0.0	-0.74	13.102	15.057	12.076	1418.9
2.0	2.0	-0.79	13.480	15.553	12.475	1419.3
5.1	5.1	-0.89	17.115	20.281	16.289	1424.7
8.4	8.3	-1.12	22.133	26.946	21.668	1431.2
11.9	11.9	-1.38	22.611	27.823	22.379	1433.2
17.2	17.1	-1.32	22.773	27.987	22.511	1433.7
22.0	21.0	-1.13	23.724	29.085	23.395	1436.2
27.3	27.1	-1.02	24.844	30.478	24.516	1438.7
32.4	32.3	-1.17	24.836	30.747	24.739	1438.4
38.2	38.0	-1.21	25.074	30.975	24.924	1438.6
43.0	43.6	-1.49	25.073	31.258	25.159	1437.8
49.5	49.2	-1.44	25.308	31.532	25.379	1438.4
54.0	54.6	-1.38	25.506	31.735	25.543	1439.1
60.0	59.7	-1.46	25.824	31.978	25.741	1439.1
65.7	65.3	-1.50	25.737	32.170	25.897	1439.3
71.5	71.1	-1.50	25.838	32.303	26.005	1439.6
77.3	76.8	-1.49	25.933	32.417	26.097	1439.9
82.7	82.1	-1.49	26.000	32.509	26.171	1440.1
88.0	87.4	-1.48	26.058	32.574	26.224	1440.3
93.8	93.2	-1.47	26.122	32.644	26.280	1440.5
99.5	98.6	-1.47	26.180	32.725	26.346	1440.7
105.2	104.5	-1.47	26.238	32.781	26.399	1440.9
110.5	109.0	-1.52	26.250	32.869	26.464	1440.9
115.8	115.1	-1.53	26.276	32.917	26.503	1441.0
121.6	120.7	-1.53	26.328	32.978	26.553	1441.1
127.3	126.4	-1.54	26.364	33.040	26.603	1441.3
133.0	132.0	-1.58	26.394	33.103	26.654	1441.3
138.4	137.4	-1.57	26.431	33.156	26.697	1441.5
143.6	142.6	-1.57	26.464	33.202	26.735	1441.6
149.4	148.3	-1.57	26.510	33.256	26.778	1441.8
155.2	154.0	-1.55	26.571	33.318	26.828	1442.0
160.9	159.8	-1.53	26.636	33.378	26.876	1442.3
166.3	165.0	-1.49	26.728	33.455	26.938	1442.7
171.5	170.2	-1.44	26.842	33.552	27.015	1443.2
177.1	175.8	-1.39	26.927	33.620	27.089	1443.5
182.8	181.4	-1.31	27.083	33.731	27.156	1444.2
188.5	187.1	-1.24	27.204	33.814	27.221	1444.7
194.0	182.6	-1.12	27.387	33.931	27.312	1445.5
199.4	197.9	-1.02	27.557	34.046	27.401	1446.2
205.1	203.5	-0.80	27.738	34.154	27.484	1447.0
211.0	209.4	-0.78	27.810	34.255	27.582	1447.8
216.8	215.2	-0.70	28.033	34.320	27.611	1448.4
222.3	220.5	-0.63	28.144	34.385	27.680	1448.8
227.1	225.3	-0.51	28.294	34.453	27.710	1449.6
232.1	230.2	-0.46	28.368	34.491	27.738	1450.0
237.2	235.3	-0.43	28.416	34.516	27.757	1450.2
242.1	240.1	-0.39	28.480	34.548	27.781	1450.6
247.2	245.1	-0.34	28.542	34.575	27.801	1450.9
252.2	250.1	-0.29	28.604	34.601	27.820	1451.2
257.5	255.3	-0.28	28.654	34.623	27.835	1451.5
262.7	260.5	-0.22	28.699	34.656	27.844	1451.8
268.0	265.8	-0.18	28.744	34.654	27.857	1452.1
273.7	271.4	-0.13	28.809	34.674	27.870	1452.4
279.3	277.0	-0.10	28.845	34.685	27.877	1452.7
285.1	282.7	-0.05	28.902	34.704	27.891	1453.0
290.8	288.4	-0.01	28.950	34.717	27.898	1453.3
297.0	294.4	0.02	28.989	34.728	27.906	1453.6
303.2	300.6	0.07	29.039	34.742	27.915	1453.9

PRESSURE (dbar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
2.6	2.6	-1.45	22.641	27.840	22.474	1432.8
6.4	8.4	-1.46	22.653	27.859	22.490	1432.9
15.2	15.1	-1.36	22.867	28.246	22.753	1433.9
21.9	21.8	-1.04	24.565	30.126	24.234	1438.2
28.7	28.5	-1.10	24.816	30.848	24.657	1438.6
35.3	35.1	-1.33	24.872	30.821	24.802	1437.8
42.3	42.1	-1.44	24.955	31.051	24.980	1437.9
49.2	49.0	-1.48	25.303	31.565	25.407	1438.3
56.2	55.9	-1.43	25.584	31.888	25.668	1439.1
63.2	62.8	-1.44	25.734	32.101	25.840	1439.4
70.0	69.6	-1.51	25.827	32.297	26.000	1439.5
77.0	76.5	-1.43	25.864	32.393	26.076	1440.1
84.2	83.7	-1.45	26.008	32.471	26.140	1440.3
91.6	91.0	-1.46	26.095	32.605	26.248	1440.5
98.2	97.6	-1.47	26.151	32.687	26.315	1441.6
104.9	104.2	-1.49	26.187	32.752	26.368	1441.8
111.6	110.9	-1.50	26.230	32.814	26.419	1441.9
118.3	117.5	-1.51	26.272	32.879	26.471	1441.1
123.3	122.5	-1.52	26.312	32.943	26.523	1441.2
124.4	123.5	-1.52	26.319	32.954	26.533	1441.2
125.2	124.3	-1.52	26.319	32.955	26.533	1441.2
131.8	130.7	-1.53	26.382	33.221	26.587	1441.4
138.0	137.1	-1.53	26.400	33.074	26.630	1441.5
144.1	143.1	-1.55	26.437	33.140	26.684	1441.6
150.4	149.4	-1.55	26.493	33.218	26.747	1441.6
157.0	155.8	-1.55	26.532	33.262	26.793	1442.0
163.4	162.2	-1.54	26.803	33.341	26.847	1442.3
169.7	168.5	-1.51	26.884	33.425	26.914	1442.6
176.3	175.0	-1.48	26.784	33.491	26.966	1442.9
183.1	181.7	-1.40	26.915	33.622	27.054	1443.6
189.7	188.3	-1.30	27.096	33.736	27.160	1444.4
196.5	195.0	-1.16	27.296	33.872	27.266	1445.2
203.4	201.8	-1.07	27.471	33.979	27.349	1446.0
210.3	208.6	-0.97	27.630	34.082	27.428	1446.7
217.0	215.3	-0.93	27.839	34.198	27.517	1447.6
223.6	221.8	-0.70	28.013	34.209	27.586	1448.4
230.7	228.0	-0.60	28.184	34.378	27.653	1449.1
236.8	234.9	-0.53	28.269	34.434	27.696	1449.6
243.0	241.0	-0.47	28.361	34.478	27.728	1450.1
248.8	246.8	-0.41	28.441	34.518	27.759	1450.5
255.6	253.5	-0.37	28.502	34.550	27.782	1450.9
262.1	259.9	-0.30	28.587	34.585	27.807	1451.3
268.4	265.2	-0.25	28.655	34.610	27.825	1451.7
275.7	273.2	-0.18	28.740	34.642	27.847	1452.4
282.3	279.9	-0.14	28.761	34.660	27.859	1452.5
289.3	286.8	-0.10	28.836	34.674	27.869	1452.8
296.0	294.4	0.02	28.889	34.689	27.879	1453.1
304.0	302.1	0.01	28.936	34.704	27.889	1453.4
304.0	302.1	0.01	28.970	34.713	27.895	1453.6

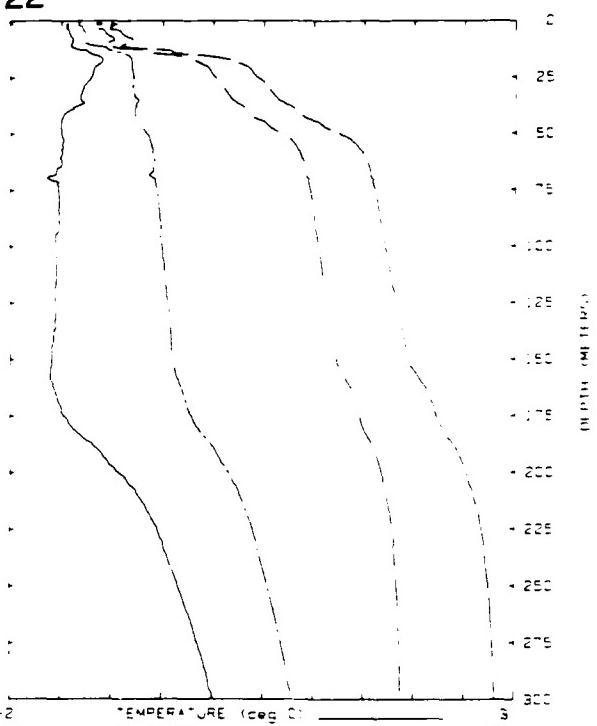
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
21	X		236	0437	Ship	71 9.0	141 24.6
22	X		236	1242	Ship	71 1.2	142 36.4

21



-2 TEMPERATURE (deg C) 3  
25 SALINITY 35  
20 DENSITY (g/cm<sup>3</sup>) 30  
1425 SOUND SPEED (M/S) 1475

22



-2 TEMPERATURE (deg C) 3  
25 SALINITY 35  
20 DENSITY (g/cm<sup>3</sup>) 30  
1425 SOUND SPEED (M/S) 1475

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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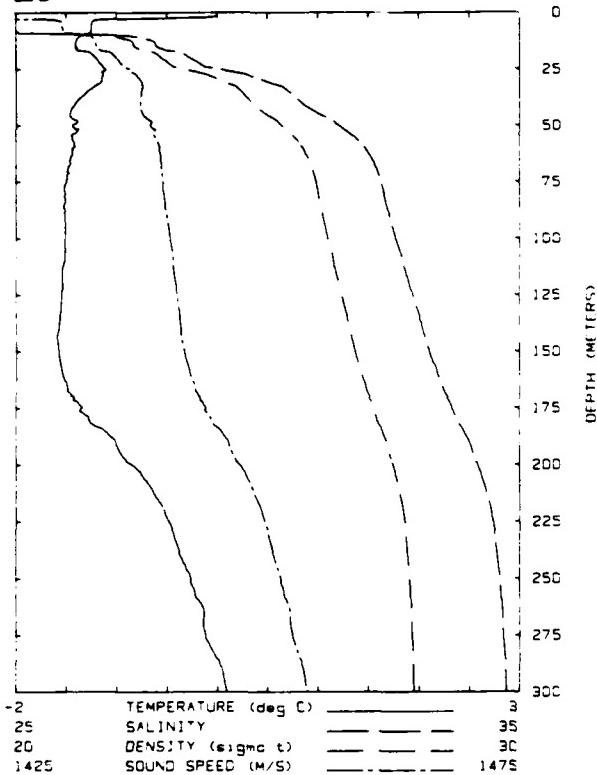
1.7	1.7	-1.26	21.622	26.397	21.226	1431.6
7.0	7.0	-1.39	22.512	27.706	22.285	1432.8
13.1	13.0	-1.44	22.591	27.855	22.405	1432.9
19.1	19.0	-1.35	23.044	28.380	22.829	1434.1
25.6	25.4	-1.09	24.733	30.395	24.452	1438.2
32.9	32.7	-1.25	24.844	30.706	24.708	1438.0
40.1	39.8	-1.45	24.805	30.852	24.829	1437.4
47.3	47.1	-1.40	25.189	31.411	25.282	1438.1
53.7	53.4	-1.42	25.535	31.817	25.610	1439.0
60.9	60.5	-1.45	25.701	32.068	25.814	1439.3
68.3	67.9	-1.50	25.769	32.207	25.927	1439.4
75.7	75.2	-1.50	25.870	32.343	26.037	1439.7
83.0	82.5	-1.51	25.917	32.415	26.098	1439.9
89.3	88.8	-1.51	25.971	32.467	26.154	1440.1
96.7	95.0	-1.51	26.027	32.550	26.212	1440.3
104.0	103.4	-1.45	26.152	32.664	26.298	1440.8
111.4	110.7	-1.48	26.190	32.738	26.357	1440.9
118.5	117.7	-1.54	26.197	32.815	26.421	1440.8
125.1	124.2	-1.53	26.250	32.873	26.467	1441.0
132.4	131.5	-1.56	26.292	32.953	26.533	1441.2
139.8	138.8	-1.57	26.345	33.030	26.602	1441.3
147.1	146.1	-1.58	26.409	33.130	26.676	1441.5
153.6	152.7	-1.57	26.464	33.196	26.729	1441.7
160.7	159.5	-1.56	26.540	33.281	26.788	1442.0
168.0	166.8	-1.53	26.849	33.389	28.805	1442.5
175.3	174.0	-1.46	26.767	33.492	26.867	1442.9
182.6	181.2	-1.35	26.980	33.854	27.095	1443.9
189.9	187.5	-1.26	27.130	33.745	27.166	1444.5
196.1	194.8	-1.18	27.300	33.873	27.266	1445.2
203.4	201.8	-0.98	27.584	34.030	27.387	1446.5
210.6	209.0	-0.83	27.816	34.181	27.504	1447.5
218.0	216.2	-0.71	28.000	34.283	27.581	1448.3
224.1	222.4	-0.61	28.143	34.363	27.642	1449.0
230.7	228.9	-0.55	28.235	34.415	27.681	1449.4
236.8	234.9	-0.48	28.342	34.477	27.720	1449.9
243.0	241.0	-0.43	28.415	34.514	27.756	1450.3
249.1	247.1	-0.37	28.500	34.550	27.782	1450.8
255.3	253.1	-0.33	28.556	34.573	27.799	1451.1
261.6	259.4	-0.26	28.639	34.607	27.823	1451.5
268.0	265.7	-0.18	28.726	34.641	27.847	1452.0
274.5	272.2	-0.14	28.787	34.659	27.859	1452.4
281.3	278.9	-0.09	28.843	34.678	27.871	1452.7
287.6	285.1	-0.04	28.908	34.696	27.884	1453.1
294.0	291.5	0.01	28.982	34.714	27.896	1453.4
300.3	297.7	0.05	29.018	34.729	27.905	1453.8
306.3	303.7	0.10	29.072	34.745	27.916	1454.1
317.3	314.5	0.17	29.148	34.763	27.926	1454.6
326.5	325.6	0.22	29.210	34.780	27.937	1455.0
339.5	336.5	0.27	29.271	34.794	27.946	1455.5

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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1.2	1.2	-1.42	22.033	27.089	21.786	1431.8
1.2	1.2	-1.40	22.035	27.079	21.778	1431.8
4.1	4.1	-1.39	22.156	27.230	21.900	1432.2
8.6	9.8	-1.36	22.275	27.357	22.002	1432.6
15.6	15.5	-1.09	23.712	29.031	23.351	1436.2
21.5	21.4	-1.15	24.264	29.825	23.984	1437.1
27.7	27.5	-1.22	24.422	30.108	24.223	1437.2
33.5	33.3	-1.20	24.539	30.319	24.395	1437.3
39.4	39.2	-1.37	24.752	30.696	24.702	1437.5
45.6	45.3	-1.47	25.041	31.199	25.110	1437.8
52.2	51.9	-1.46	25.475	31.770	25.573	1438.7
58.9	58.6	-1.46	25.684	32.058	25.805	1439.2
65.3	64.9	-1.50	25.744	32.175	25.901	1439.3
72.0	71.5	-1.48	25.806	32.245	25.957	1439.6
78.7	78.2	-1.49	25.873	32.335	26.030	1439.8
85.4	84.9	-1.49	25.914	32.391	26.076	1439.9
92.0	91.4	-1.48	25.965	32.445	26.119	1440.2
98.5	97.8	-1.52	25.977	32.498	26.163	1440.2
105.1	104.4	-1.51	26.025	32.552	26.206	1440.4
111.8	111.0	-1.52	26.060	32.603	26.246	1440.5
118.4	117.6	-1.52	26.122	32.663	26.297	1440.7
124.8	124.0	-1.53	26.141	32.722	26.345	1440.8
131.4	130.5	-1.52	26.187	32.764	26.395	1441.1
138.0	137.1	-1.54	26.233	32.852	26.451	1441.2
144.7	143.7	-1.56	26.263	32.908	26.496	1441.3
151.3	150.2	-1.56	26.313	32.976	26.551	1441.5
157.5	156.4	-1.57	26.425	33.141	26.685	1441.7
164.2	163.0	-1.54	26.609	33.350	26.853	1442.3
170.6	169.3	-1.49	26.728	33.458	26.940	1442.8
177.1	175.8	-1.41	26.879	33.576	27.034	1443.4
183.5	182.2	-1.30	27.063	33.700	27.131	1444.2
189.8	188.4	-1.14	27.356	33.809	27.285	1445.4
196.3	194.8	-1.01	27.563	34.044	27.399	1446.2
202.7	201.2	-0.86	27.770	34.156	27.485	1447.2
209.3	207.7	-0.73	27.860	34.258	27.562	1448.0
215.8	214.1	-0.64	28.103	34.341	27.625	1448.7
222.3	220.5	-0.56	28.215	34.406	27.674	1449.2
228.5	226.7	-0.50	28.317	34.482	27.716	1449.7
234.1	232.3	-0.44	28.387	34.493	27.739	1450.1
239.5	237.8	-0.40	28.448	34.525	27.763	1450.4
244.8	242.9	-0.38	28.507	34.553	27.784	1450.7
250.8	248.7	-0.31	28.576	34.581	27.804	1451.1
257.3	255.1	-0.26	28.641	34.608	27.823	1451.5
263.7	261.5	-0.20	28.710	34.814	27.841	1451.9
270.2	267.9	-0.15	28.773	34.855	27.856	1452.2
276.6	274.3	-0.11	28.818	34.866	27.855	1452.5
282.3	279.9	-0.07	28.870	34.885	27.876	1452.8
288.0	285.5	-0.04	28.908	34.898	27.883	1453.1
293.8	291.4	0.00	28.956	34.711	27.894	1453.4
299.9	297.3	0.04	29.003	34.726	27.894	1453.7
305.5	302.9	0.08	29.046	34.737	27.911	1454.0

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
23	X		236	2321	Ship	70 54.8	143 35.1
24		X	236	1700	Helo	71 42.9	134 15.0

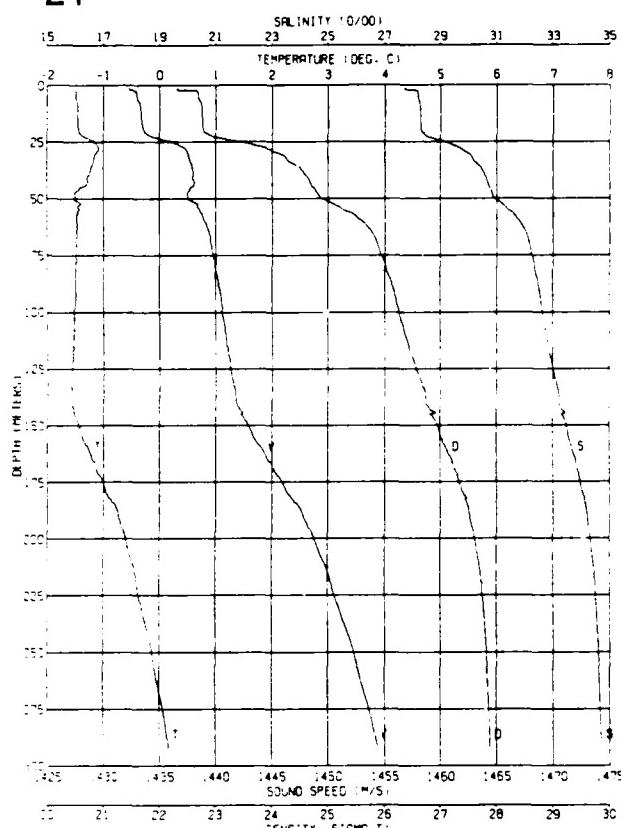
23



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dBar) (M) (deg C) (mS/cm) (‰) (kg/m<sup>3</sup>) (km/sec)

1. 9	1. 9	-0. 02	2. 841	2. 852	2. 234	1406. 2
6. 8	6. 7	-1. 25	20. 447	24. 825	19. 957	1429. 6
13. 3	13. 2	-1. 41	22. 540	27. 756	22. 326	1432. 9
19. 9	19. 8	-1. 21	23. 172	28. 420	22. 859	1434. 9
26. 5	26. 4	-1. 15	23. 887	28. 318	23. 584	1435. 6
33. 2	33. 0	-1. 23	24. 568	30. 309	24. 388	1437. 6
39. 8	39. 6	-1. 40	24. 688	30. 656	24. 670	1437. 3
46. 5	46. 3	-1. 46	25. 011	31. 147	25. 068	1437. 8
53. 1	53. 0	-1. 40	25. 392	31. 592	25. 427	1438. 8
60. 1	59. 7	-1. 41	25. 610	31. 804	25. 680	1439. 3
66. 7	66. 3	-1. 47	25. 721	32. 110	25. 846	1439. 4
73. 3	72. 8	-1. 48	25. 780	32. 228	25. 944	1439. 5
80. 1	76. 6	-1. 52	25. 831	32. 308	26. 009	1439. 6
86. 7	86. 2	-1. 53	25. 871	32. 388	26. 058	1439. 9
93. 4	82. 8	-1. 51	25. 849	37. 456	28. 129	1440. 1
100. 0	89. 9	-1. 51	26. 009	32. 536	26. 194	1440. 3
106. 8	106. 1	-1. 51	26. 080	32. 629	26. 269	1440. 5
113. 6	112. 8	-1. 54	26. 132	32. 723	26. 346	1440. 6
120. 3	119. 5	-1. 54	26. 193	32. 805	26. 413	1440. 8
126. 9	126. 0	-1. 55	26. 250	32. 901	26. 490	1440. 1
133. 7	132. 7	-1. 56	26. 319	32. 982	26. 564	1441. 2
140. 3	139. 3	-1. 57	26. 368	33. 072	26. 629	1441. 4
147. 1	146. 0	-1. 59	26. 415	33. 152	26. 695	1441. 5
153. 7	152. 6	-1. 57	26. 496	33. 240	26. 768	1441. 6
160. 3	159. 2	-1. 54	26. 813	33. 384	26. 865	1442. 2
167. 1	165. 8	-1. 49	26. 737	33. 474	26. 953	1442. 7
173. 9	172. 6	-1. 36	26. 933	33. 619	27. 058	1443. 5
180. 6	179. 5	-1. 27	27. 120	33. 745	27. 188	1444. 3
187. 7	186. 3	-1. 09	27. 388	33. 915	27. 288	1445. 5
194. 8	193. 3	-0. 98	27. 589	34. 050	27. 403	1446. 3
202. 0	200. 5	-0. 84	27. 804	34. 176	27. 500	1447. 3
209. 3	207. 7	-0. 70	28. 000	34. 279	27. 577	1448. 2
216. 6	214. 8	-0. 60	28. 153	34. 372	27. 649	1448. 9
223. 5	221. 8	-0. 52	28. 282	34. 444	27. 703	1449. 5
230. 3	228. 5	-0. 45	28. 386	34. 503	27. 747	1450. 0
236. 6	234. 7	-0. 40	28. 451	34. 533	27. 788	1450. 4
242. 8	240. 8	-0. 36	28. 514	34. 564	27. 783	1450. 7
248. 6	246. 6	-0. 30	28. 582	34. 597	27. 816	1451. 1
254. 7	252. 6	-0. 26	28. 641	34. 615	27. 829	1451. 4
261. 6	259. 6	-0. 18	28. 735	34. 646	27. 850	1451. 9
268. 2	266. 9	-0. 14	28. 780	34. 663	27. 862	1452. 3
275. 4	274. 0	-0. 12	28. 810	34. 678	27. 873	1452. 5
283. 3	280. 8	-0. 06	28. 887	34. 888	27. 886	1452. 8
288. 5	287. 0	0. 02	28. 981	34. 725	27. 904	1453. 4
295. 6	293. 2	0. 07	29. 032	34. 736	27. 910	1453. 8
302. 1	299. 5	0. 10	29. 068	34. 744	27. 915	1454. 0
308. 2	305. 6	0. 12	29. 093	34. 750	27. 919	1454. 2
314. 4	311. 8	0. 16	29. 138	34. 764	27. 928	1454. 5
320. 5	317. 7	0. 20	29. 185	34. 778	27. 935	1454. 8

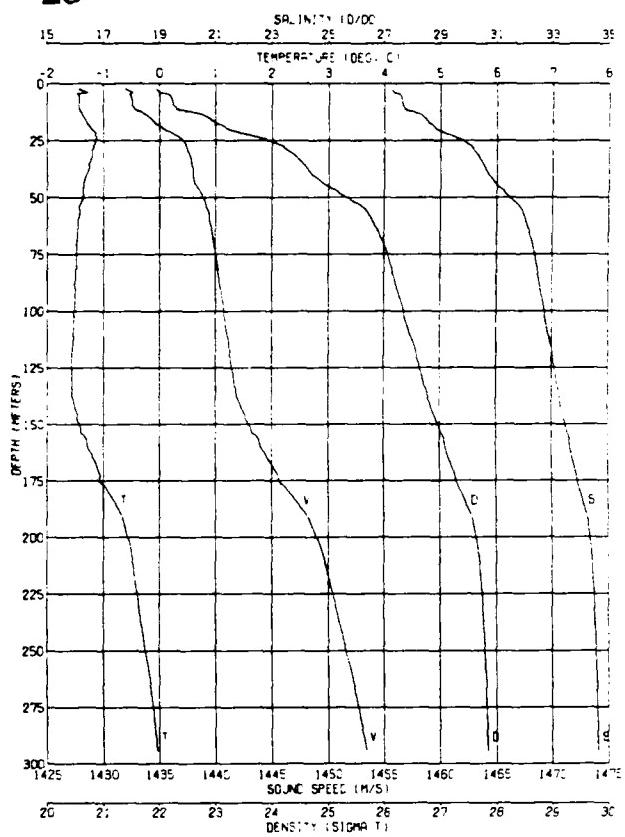
24



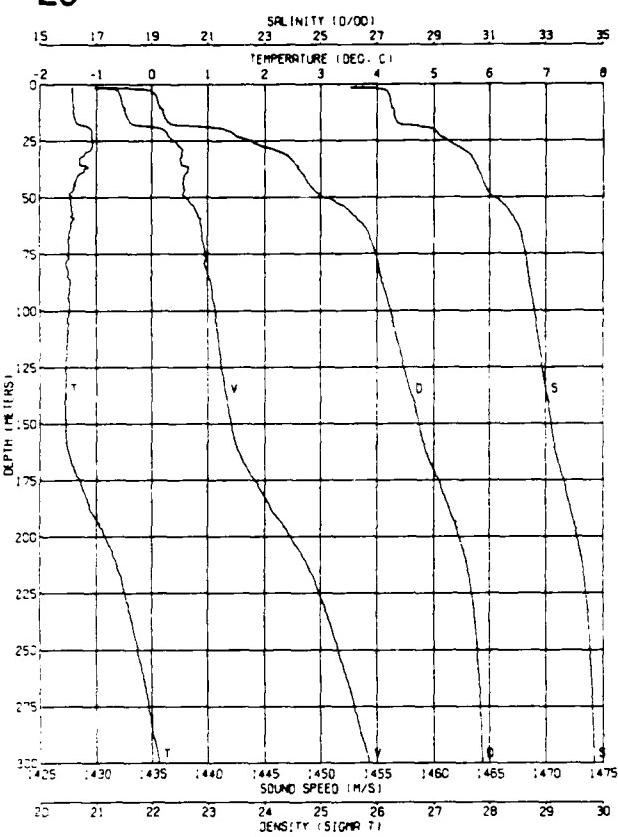
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	-1.49	1433.0	22.69	28.20
10.1	-1.46	1433.3	22.75	28.27
15.0	-1.46	1433.4	22.75	28.28
20.1	-1.44	1433.6	22.78	28.31
25.2	-1.15	1436.2	23.51	29.22
30.1	-1.13	1437.5	24.12	29.97
35.4	-1.20	1437.9	24.43	30.37
40.2	-1.28	1437.9	24.62	30.60
45.4	-1.42	1437.7	24.76	30.76
50.0	-1.51	1437.6	24.89	30.93
55.1	-1.43	1438.6	25.29	31.41
60.3	-1.47	1439.1	25.61	31.82
65.3	-1.47	1439.4	25.78	32.03
70.3	-1.48	1439.6	25.88	32.14
75.1	-1.49	1439.8	25.94	32.22
80.2	-1.49	1440.0	26.03	32.33
85.0	-1.49	1440.2	26.10	32.42
90.3	-1.49	1440.4	26.17	32.51
95.2	-1.49	1440.5	26.21	32.56
100.2	-1.53	1440.6	26.27	32.62
110.1	-1.53	1440.9	26.37	32.76
121.0	-1.54	1441.3	26.52	32.94
130.3	-1.57	1441.5	26.66	33.11
140.2	-1.56	1441.9	26.75	33.22
150.4	-1.44	1442.9	26.97	33.49
160.2	-1.27	1444.1	27.11	33.67
170.4	-1.11	1445.3	27.27	33.87
180.3	-0.94	1446.5	27.41	34.06
190.3	-0.73	1447.8	27.52	34.21
200.1	-0.59	1448.8	27.61	34.33
210.3	-0.47	1449.7	27.69	34.43
220.3	-0.39	1450.3	27.74	34.49
230.1	-0.31	1450.9	27.77	34.54
240.2	-0.21	1451.6	27.80	34.58
250.4	-0.13	1452.3	27.82	34.62
260.2	-0.06	1452.8	27.84	34.64
270.0	0.02	1453.3	27.86	34.67
280.0	0.09	1453.6	27.87	34.69
290.3	.15	1454.3	27.88	34.71
292.2	.16	1454.4	27.88	34.70

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
25	X		236	1800	Helo	71 29.5	142 58.0
26	X		236	1845	Helo	71 14.0	142 59.0

25



26



DEPTH (M) T (C) V (M/S) DENSITY S (‰)

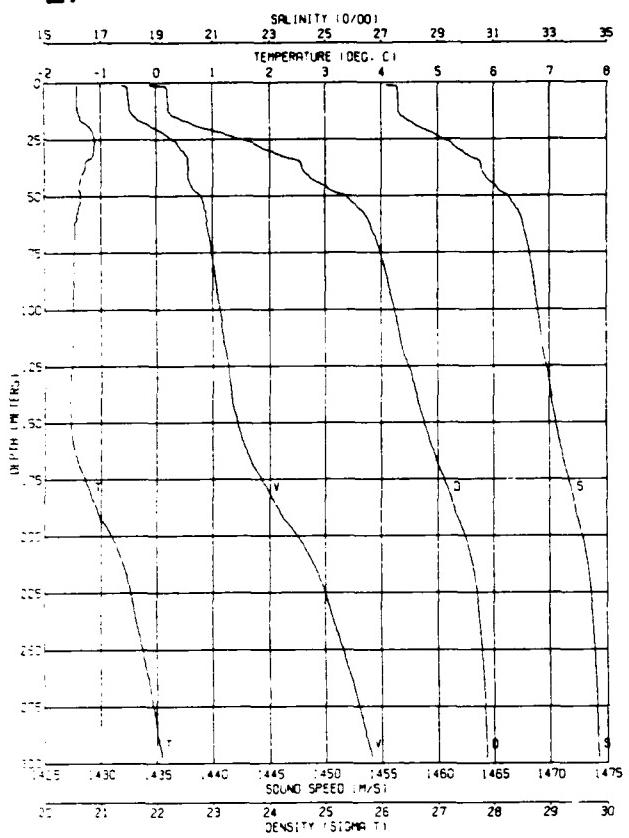
5.2	-1.44	1432.4	22.19	27.58
10.4	-1.43	1432.7	22.29	27.71
15.3	-1.33	1434.2	22.89	28.45
20.1	-1.21	1435.4	23.23	28.88
25.1	-1.15	1437.1	23.99	29.81
30.1	-1.19	1437.6	24.33	30.23
35.0	-1.25	1437.8	24.54	30.49
40.3	-1.31	1438.0	24.73	30.72
45.3	-1.35	1438.4	25.01	31.08
50.4	-1.36	1439.0	25.35	31.49
55.1	-1.43	1439.3	25.66	31.88
60.5	-1.46	1439.5	25.79	32.04
65.2	-1.46	1439.7	25.91	32.19
70.2	-1.48	1439.9	26.00	32.30
75.1	-1.49	1440.0	26.07	32.38
80.3	-1.49	1440.2	26.13	32.45
85.4	-1.50	1440.3	26.19	32.52
90.2	-1.51	1440.4	26.23	32.58
95.3	-1.52	1440.6	26.30	32.66
100.1	-1.53	1440.7	26.36	32.74
110.2	-1.55	1441.0	26.47	32.87
120.3	-1.56	1441.3	26.59	33.03
130.0	-1.57	1441.6	26.70	33.16
140.3	-1.53	1442.1	26.82	33.31
150.3	-1.43	1443.0	26.96	33.48
160.2	-1.28	1444.1	27.11	33.67
170.5	-1.10	1445.3	27.24	33.84
180.4	-.90	1446.6	27.39	34.03
190.3	-.68	1448.1	27.55	34.24
200.4	-.56	1449.0	27.64	34.36
210.3	-.49	1449.7	27.69	34.43
220.3	-.43	1450.2	27.72	34.47
230.9	-.37	1450.7	27.76	34.52
240.6	-.31	1451.1	27.77	34.54
250.2	-.25	1451.6	27.79	34.57
260.3	-.19	1452.1	27.81	34.59
270.3	-.14	1452.5	27.82	34.61
280.0	-.10	1452.9	27.83	34.62
290.1	-.05	1453.3	27.84	34.64
294.5	-.04	1453.4	27.83	34.63

DEPTH (M) T (C) V (M/S) DENSITY S (‰)

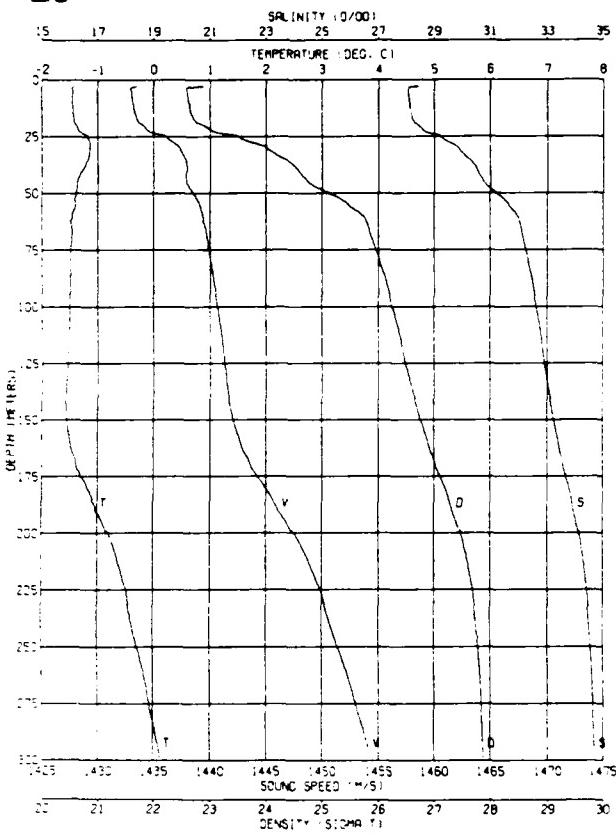
5.1	-1.44	1432.2	22.08	27.44
10.4	-1.42	1432.5	22.15	27.53
15.3	-1.39	1432.9	22.24	27.65
20.1	-1.09	1436.0	23.31	28.98
25.2	-1.07	1437.0	23.76	29.53
30.2	-1.18	1437.6	24.29	30.19
35.0	-1.31	1437.6	24.54	30.50
40.1	-1.33	1437.9	24.71	30.70
45.0	-1.41	1437.8	24.82	30.84
50.0	-1.47	1438.1	25.07	31.15
55.3	-1.45	1438.9	25.49	31.66
60.1	-1.44	1439.3	25.67	31.88
65.3	-1.49	1439.5	25.84	32.10
70.0	-1.50	1439.6	25.92	32.19
75.3	-1.52	1439.7	25.99	32.28
80.3	-1.54	1439.8	26.03	32.33
85.1	-1.51	1440.0	26.06	32.37
90.1	-1.48	1440.4	26.13	32.46
95.3	-1.49	1440.5	26.19	32.53
100.2	-1.49	1440.7	26.25	32.60
110.5	-1.52	1440.9	26.34	32.71
120.0	-1.55	1441.1	26.43	32.83
130.4	-1.55	1441.4	26.52	32.94
140.2	-1.57	1441.7	26.65	33.09
150.4	-1.55	1442.1	26.73	33.20
160.4	-1.52	1442.5	26.83	33.32
170.1	-1.41	1443.5	26.99	33.52
180.3	-1.21	1444.8	27.16	33.74
190.4	-1.06	1445.9	27.31	33.93
200.1	-.84	1447.3	27.46	34.13
210.2	-.66	1448.6	27.58	34.29
220.6	-.53	1449.6	27.66	34.39
230.2	-.42	1450.3	27.71	34.46
240.3	-.34	1451.0	27.75	34.52
250.2	-.25	1451.6	27.78	34.56
260.3	-.16	1452.2	27.81	34.60
270.4	-.06	1452.8	27.83	34.63
280.1	-.02	1453.3	27.85	34.65
290.1	.05	1453.8	27.86	34.67
300.1	.12	1454.3	27.88	34.70
300.7	.12	1454.3	27.88	34.70

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
27	X		236	2257	Helo	71 10.2	143 36.0
28	X		236	2342	Helo	71 35.0	143 35.3

27



28



DEPTH (M)

T (C)

V (M/S)

DENSITY

S (0/00)

5.4	-1.43	1432.5	22.21	27.60
10.1	-1.42	1432.6	22.22	27.62
15.1	-1.37	1433.1	22.36	27.80
20.1	-1.18	1434.9	22.85	28.41
25.4	-1.11	1436.5	23.55	29.27
30.5	-1.14	1437.4	24.06	29.90
35.1	-1.28	1437.8	24.56	30.52
40.1	-1.34	1437.8	24.66	30.64
45.1	-1.40	1438.0	24.95	31.00
50.2	-1.36	1439.0	25.39	31.55
55.2	-1.40	1439.3	25.59	31.79
60.5	-1.44	1439.5	25.78	32.02
65.1	-1.46	1439.6	25.84	32.10
70.0	-1.46	1439.8	25.93	32.21
75.3	-1.49	1439.9	25.99	32.29
80.3	-1.49	1440.0	26.05	32.36
85.5	-1.49	1440.2	26.10	32.42
90.4	-1.50	1440.3	26.14	32.47
95.5	-1.49	1440.5	26.19	32.54
100.5	-1.50	1440.7	26.24	32.60
110.2	-1.52	1440.9	26.33	32.70
120.4	-1.51	1441.2	26.41	32.80
130.4	-1.55	1441.4	26.55	32.97
140.2	-1.56	1441.7	26.64	33.09
150.2	-1.54	1442.1	26.76	33.23
160.2	-1.50	1442.7	26.88	33.39
170.1	-1.37	1443.7	27.04	33.58
180.2	-1.21	1444.9	27.19	33.77
190.4	-1.04	1446.0	27.32	33.95
200.1	-.80	1447.5	27.49	34.16
210.2	-.63	1448.7	27.60	34.30
220.1	-.52	1449.6	27.67	34.40
230.2	-.42	1450.3	27.72	34.47
240.3	-.34	1451.0	27.76	34.52
250.5	-.24	1451.7	27.79	34.57
260.2	-.18	1452.2	27.81	34.60
270.0	-.10	1452.7	27.83	34.63
280.1	-.02	1453.3	27.85	34.65
290.1	.03	1453.7	27.86	34.67
297.4	.09	1454.1	27.85	34.66

DEPTH (M)

T (C)

V (M/S)

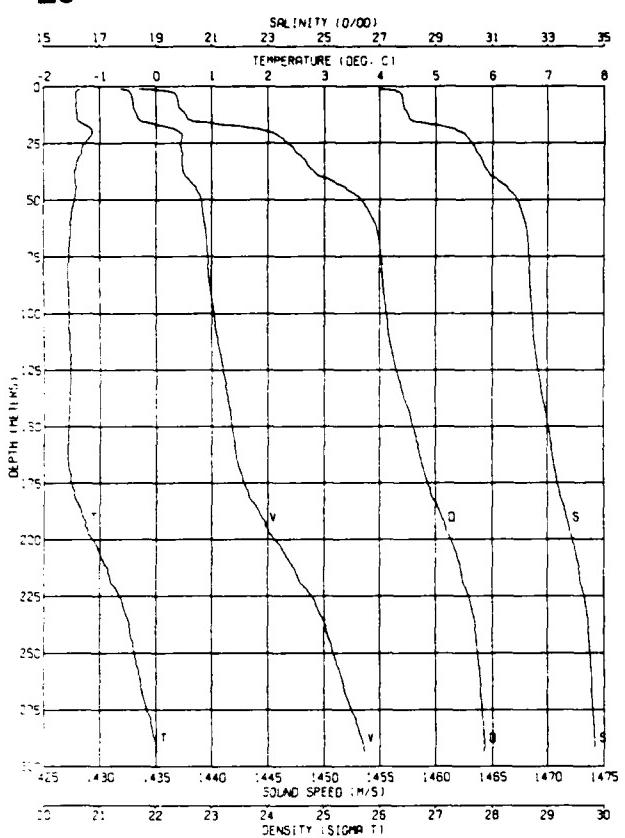
DENSITY

S (0/00)

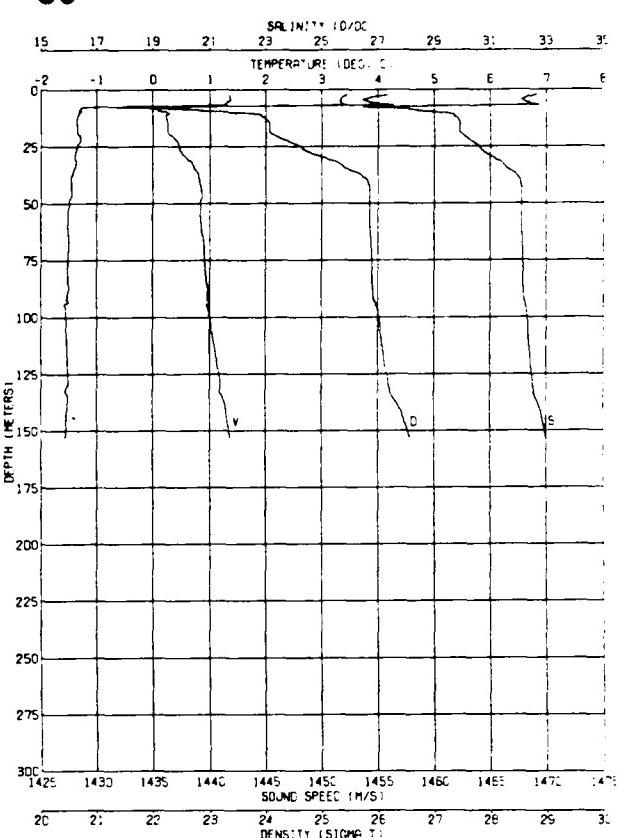
5.2	-1.44	1433.1	22.59	28.07
10.3	-1.45	1433.2	22.62	28.12
15.1	-1.44	1433.4	22.66	28.17
20.5	-1.37	1434.2	22.91	28.48
25.2	-1.17	1436.1	23.53	29.24
30.2	-1.14	1437.3	24.03	29.86
35.0	-1.18	1437.8	24.34	30.25
40.1	-1.29	1437.8	24.59	30.55
45.3	-1.37	1437.9	24.76	30.77
50.3	-1.38	1438.5	25.15	31.25
55.4	-1.40	1439.1	25.49	31.67
60.1	-1.46	1439.3	25.73	31.96
65.3	-1.45	1439.6	25.83	32.09
70.0	-1.46	1439.7	25.89	32.16
75.1	-1.48	1439.9	25.97	32.26
80.2	-1.46	1440.0	26.03	32.33
85.3	-1.48	1440.2	26.10	32.41
90.2	-1.49	1440.4	26.15	32.48
95.1	-1.49	1440.5	26.20	32.54
100.2	-1.50	1440.7	26.25	32.60
110.1	-1.51	1441.0	26.36	32.74
120.0	-1.53	1441.2	26.44	32.84
130.4	-1.55	1441.4	26.54	32.96
140.1	-1.57	1441.7	26.65	33.10
150.3	-1.55	1442.1	26.77	33.24
160.2	-1.49	1442.8	26.89	33.40
170.5	-1.38	1443.6	27.02	33.56
180.0	-1.19	1444.9	27.19	33.78
190.2	-1.02	1446.1	27.32	33.95
200.4	-.79	1447.6	27.48	34.15
210.3	-.65	1448.6	27.58	34.28
220.1	-.54	1449.5	27.66	34.36
231.9	-.44	1450.3	27.73	34.46
240.1	-.38	1450.8	27.75	34.51
250.3	-.28	1451.4	27.79	34.56
260.3	-.17	1452.2	27.82	34.61
270.0	-.11	1452.7	27.83	34.63
280.4	-.02	1453.3	27.85	34.66
290.4	.06	1453.8	27.87	34.68
299.0	.12	1454.3	27.86	34.68

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
29		X	237	0015	Helo	71 25.0	143 34.0
30		X	237	0613	Ship	70 44.4	144 48.8

29



30



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

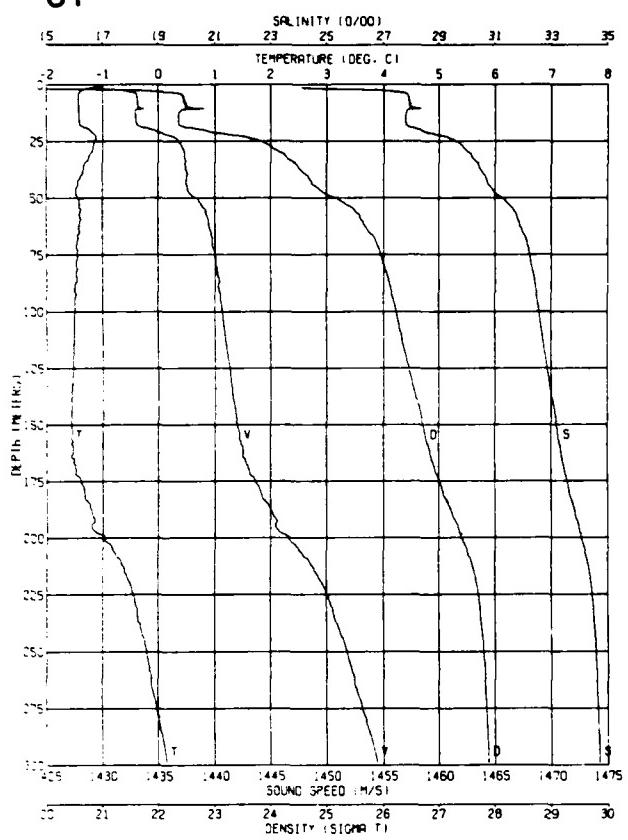
5.1	-1.42	1432.8	22.38	27.82
10.3	-1.42	1433.0	22.45	27.91
15.5	-1.37	1433.7	22.69	28.20
20.3	-1.14	1437.1	24.04	29.87
25.4	-1.28	1437.3	24.38	30.30
30.3	-1.35	1437.4	24.58	30.55
35.3	-1.42	1437.4	24.72	30.71
40.2	-1.44	1437.8	24.99	31.04
45.1	-1.43	1438.6	25.39	31.54
50.3	-1.46	1439.1	25.68	31.90
55.3	-1.49	1439.2	25.82	32.07
60.3	-1.52	1439.4	25.92	32.20
65.4	-1.52	1439.5	25.97	32.26
70.4	-1.54	1439.6	26.00	32.30
75.0	-1.54	1439.6	26.02	32.32
80.3	-1.56	1439.7	26.04	32.34
85.0	-1.56	1439.8	26.05	32.36
90.1	-1.55	1439.9	26.07	32.38
95.5	-1.56	1440.0	26.10	32.41
100.7	-1.56	1440.2	26.12	32.45
110.5	-1.53	1440.5	26.17	32.51
120.0	-1.53	1440.8	26.25	32.60
130.4	-1.53	1441.2	26.37	32.75
140.1	-1.55	1441.5	26.48	32.89
150.3	-1.56	1441.8	26.60	33.03
161.0	-1.57	1442.1	26.71	33.17
170.1	-1.53	1442.6	26.80	33.28
180.3	-1.46	1443.3	26.93	33.44
190.5	-1.29	1444.5	27.12	33.69
200.2	-1.12	1445.7	27.28	33.89
210.2	-0.94	1447.0	27.42	34.07
220.2	-0.77	1448.1	27.51	34.19
230.5	-0.58	1449.4	27.64	34.37
240.5	-0.48	1450.2	27.70	34.44
250.3	-0.39	1450.9	27.75	34.50
260.3	-0.30	1451.5	27.78	34.55
270.3	-0.22	1452.1	27.80	34.58
280.4	-0.11	1452.9	27.84	34.63
290.2	-0.01	1453.5	27.86	34.66
293.5	.02	1453.7	27.84	34.64

DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

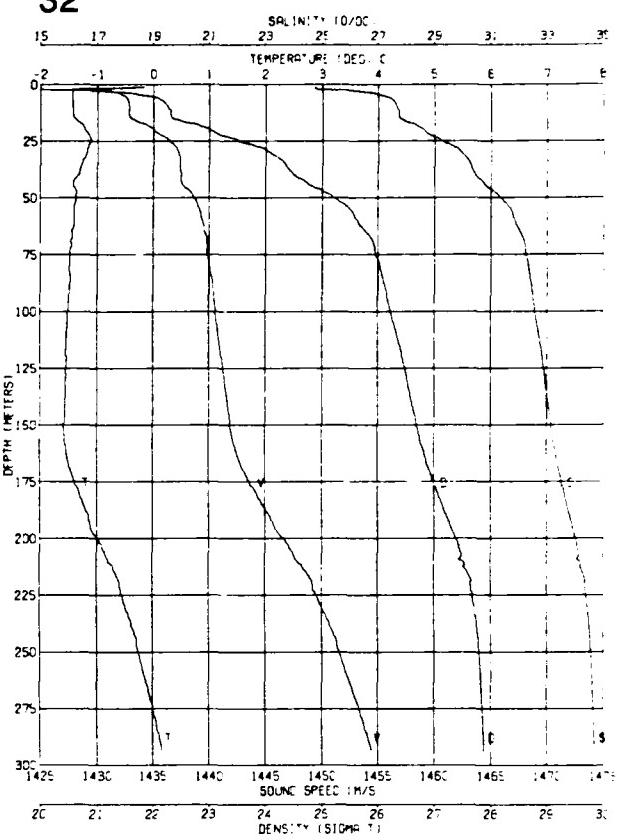
5.4	1.33	1451.7	25.81	32.22
10.1	-1.29	1436.6	23.39	29.08
15.1	-1.36	1436.5	24.03	29.87
20.4	-1.30	1436.9	24.17	30.03
25.4	-1.36	1437.5	24.62	30.59
30.2	-1.39	1438.1	25.08	31.16
36.7	-1.42	1439.1	25.66	31.88
40.3	-1.46	1439.2	25.81	32.06
45.4	-1.46	1439.3	25.85	32.11
50.6	-1.50	1439.2	25.84	32.10
58.9	-1.52	1439.3	25.86	32.12
60.3	-1.52	1439.3	25.86	32.12
65.1	-1.49	1439.5	25.87	32.14
70.2	-1.50	1439.5	25.88	32.15
75.4	-1.51	1439.6	25.89	32.16
80.1	-1.51	1439.7	25.90	32.17
85.1	-1.51	1439.7	25.91	32.18
90.3	-1.53	1439.8	25.93	32.20
95.2	-1.59	1439.8	26.00	32.29
100.2	-1.56	1440.0	26.02	32.32
110.3	-1.54	1440.3	26.07	32.38
120.4	-1.53	1440.6	26.11	32.43
130.0	-1.52	1440.9	26.18	32.51
140.1	-1.53	1441.4	26.38	32.76
150.2	-1.56	1441.7	26.52	32.94
153.2	-1.58	1441.7	26.56	32.99

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
31	X		237	1043	Ship	71 8.7	145 15.9
32	X		237	1804	Helo	71 13.3	144 45.0

31



32



DEPTH (M)    T (C)    V (M/S)    DENSITY S (0/00)

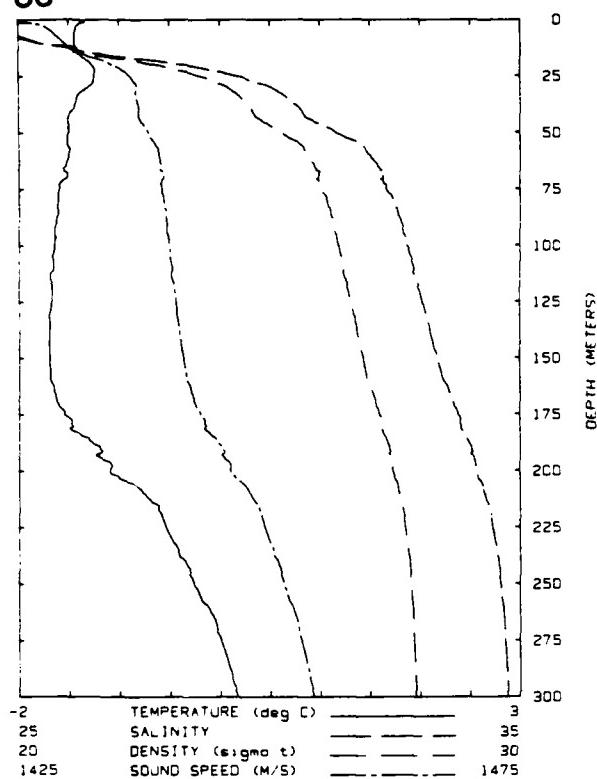
5.2	-1.43	1433.1	22.45	27.91
10.3	-1.43	1433.3	22.59	28.08
15.3	-1.42	1433.0	22.36	27.79
20.4	-1.21	1434.7	22.85	28.40
25.2	-1.15	1436.8	23.85	29.64
30.2	-1.22	1437.3	24.20	30.07
35.1	-1.32	1437.4	24.47	30.40
40.2	-1.39	1437.5	24.67	30.65
45.8	-1.47	1437.6	24.86	30.88
50.0	-1.39	1438.5	25.17	31.28
55.3	-1.39	1439.1	25.50	31.67
60.1	-1.40	1439.4	25.63	31.84
65.1	-1.41	1439.7	25.75	31.99
70.2	-1.45	1439.8	25.88	32.15
75.1	-1.44	1440.0	25.95	32.23
80.1	-1.47	1440.1	26.01	32.31
85.0	-1.46	1440.3	26.08	32.39
90.1	-1.50	1440.3	26.13	32.46
95.1	-1.49	1440.5	26.18	32.52
100.1	-1.49	1440.7	26.23	32.58
110.2	-1.51	1440.9	26.32	32.69
120.0	-1.53	1441.1	26.41	32.81
130.1	-1.54	1441.4	26.51	32.92
140.4	-1.56	1441.7	26.62	33.06
150.4	-1.56	1442.0	26.72	33.18
160.4	-1.53	1442.5	26.83	33.31
170.5	-1.48	1443.1	26.94	33.45
180.0	-1.32	1444.1	27.07	33.62
190.2	-1.18	1445.3	27.24	33.84
200.1	-.97	1446.6	27.39	34.04
210.3	-.67	1448.5	27.58	34.28
220.2	-.50	1449.6	27.67	34.40
230.1	-.40	1450.4	27.73	34.46
240.1	-.31	1451.1	27.76	34.53
250.2	-.21	1451.8	27.80	34.57
260.4	-.13	1452.4	27.82	34.61
270.3	-.06	1452.9	27.84	34.64
280.0	.02	1453.5	27.86	34.67
290.3	.10	1454.1	27.87	34.69
299.1	.14	1454.4	27.87	34.70

DEPTH (M)    T (C)    V (M/S)    DENSITY S (0/00)

5.2	-1.43	1432.5	21.92	27.25
10.1	-1.43	1432.9	22.24	27.65
15.1	-1.39	1433.1	22.38	27.81
20.3	-1.22	1435.1	23.03	28.63
25.1	-1.12	1436.5	23.57	29.29
30.1	-1.18	1437.2	24.08	29.92
35.3	-1.28	1437.4	24.34	30.24
40.2	-1.33	1437.5	24.51	30.45
45.0	-1.42	1437.8	24.83	30.86
50.0	-1.37	1438.7	25.23	31.35
55.3	-1.40	1439.2	25.52	31.71
60.2	-1.40	1439.4	25.64	31.86
65.2	-1.44	1439.6	25.80	32.05
70.3	-1.45	1439.8	25.93	32.20
75.3	-1.48	1439.9	25.97	32.26
80.1	-1.49	1440.0	26.03	32.34
85.1	-1.47	1440.3	26.08	32.39
90.1	-1.49	1440.4	26.14	32.46
95.1	-1.49	1440.5	26.18	32.52
100.1	-1.51	1440.6	26.23	32.58
110.1	-1.54	1440.8	26.34	32.72
120.0	-1.53	1441.1	26.44	32.84
130.3	-1.55	1441.4	26.52	32.94
140.3	-1.56	1441.7	26.60	33.04
150.4	-1.57	1441.9	26.70	33.15
160.1	-1.54	1442.4	26.80	33.28
170.5	-1.45	1443.2	26.93	33.45
180.5	-1.31	1444.2	27.09	33.65
190.3	-1.14	1445.4	27.24	33.83
200.2	-.99	1446.6	27.40	34.04
210.1	-.86	1448.0	27.79	34.53
220.7	-.59	1449.1	27.65	34.37
230.1	-.49	1449.9	27.71	34.45
240.2	-.36	1450.9	27.77	34.53
250.4	-.25	1451.6	27.80	34.57
260.4	-.16	1452.3	27.83	34.62
270.5	-.04	1453.0	27.85	34.65
280.1	-.06	1453.7	27.87	34.68
290.3	.14	1454.3	27.88	34.70
293.5	.17	1454.4	27.86	34.68

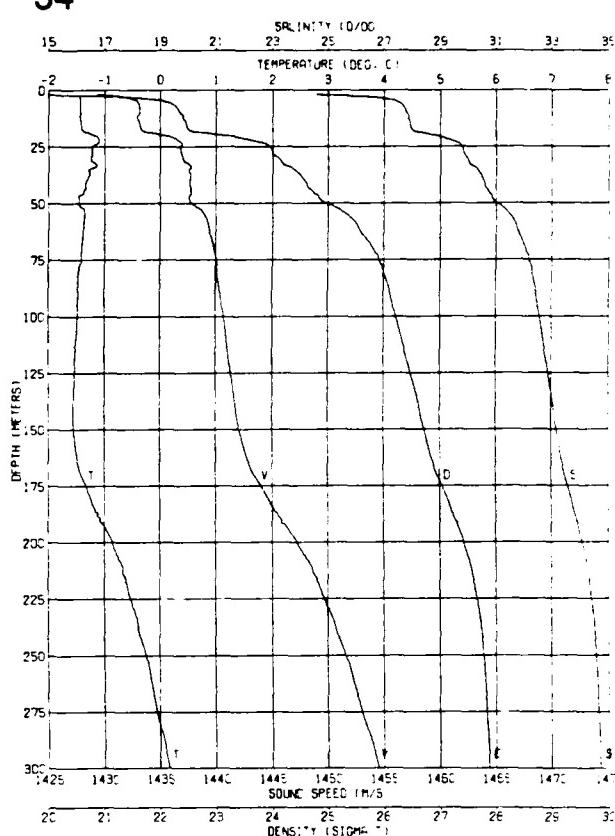
Station Number	ASL Cast	APL Cast	Julian Day	GMT hmmm	Platform	Latitude	Longitude
33	X		237	1829	Ship	71 8.8	145 22.1
34		X	237	2221	Helo	71 39.2	145 52.3

33



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.2	1.2	-1.38	17.826	31.481	17.230	1424.5
2.8	2.8	-1.42	19.452	33.811	19.218	1427.5
8.2	8.1	-1.44	20.475	35.024	20.117	1429.0
14.2	14.2	-1.40	21.438	38.272	21.126	1431.0
20.8	20.7	-1.28	23.158	38.438	22.874	1434.7
27.6	27.4	-1.25	24.060	38.854	23.854	1436.5
34.5	34.3	-1.42	24.440	30.330	24.406	1436.7
41.3	41.0	-1.48	24.633	30.648	24.665	1436.9
48.0	47.7	-1.51	24.882	31.184	25.083	1437.6
54.9	54.8	-1.52	25.424	31.763	25.568	1438.5
61.7	61.3	-1.51	25.827	32.031	25.785	1439.0
68.6	68.2	-1.51	25.800	32.265	25.975	1439.4
75.2	74.8	-1.60	25.774	32.318	26.020	1439.2
82.0	81.5	-1.81	25.881	32.480	26.151	1439.4
88.8	88.2	-1.83	25.861	32.603	26.251	1439.6
95.6	94.9	-1.84	26.006	32.679	26.313	1439.8
102.3	100.7	-1.85	26.033	32.694	26.324	1439.9
107.7	107.0	-1.66	26.084	32.764	26.382	1439.9
114.1	113.4	-1.89	26.120	32.881	26.485	1440.1
120.8	119.8	-1.67	26.223	32.991	26.566	1440.5
126.9	126.1	-1.66	26.286	33.060	26.622	1440.6
133.3	132.4	-1.70	26.327	33.159	26.703	1440.8
139.8	138.9	-1.70	26.359	33.208	26.741	1440.9
146.3	145.3	-1.70	26.425	33.286	26.806	1441.1
152.8	151.7	-1.69	26.480	33.370	26.874	1441.4
159.8	157.8	-1.69	26.548	33.441	26.931	1441.6
165.3	164.1	-1.85	26.676	33.572	27.037	1442.1
171.8	170.5	-1.81	26.799	33.686	27.120	1442.5
178.3	176.8	-1.68	26.884	33.813	27.228	1443.4
184.7	183.3	-1.41	27.102	33.870	27.271	1443.9
190.9	189.5	-1.20	27.391	34.023	27.388	1445.2
197.3	195.8	-1.11	27.533	34.113	27.450	1445.9
203.8	202.2	-1.02	27.637	34.158	27.492	1446.4
210.2	208.6	-0.78	27.924	34.271	27.574	1447.0
216.5	214.8	-0.64	28.121	34.388	27.645	1448.7
222.7	220.8	-0.57	28.224	34.428	27.881	1449.2
228.9	227.0	-0.52	28.304	34.471	27.725	1449.6
234.6	232.7	-0.44	28.408	34.521	27.761	1450.1
239.8	237.8	-0.41	28.482	34.548	27.783	1450.4
245.0	243.0	-0.21	28.570	34.598	27.810	1451.0
250.6	248.5	-0.27	28.622	34.604	27.821	1451.3
256.8	254.6	-0.21	28.899	34.831	27.839	1451.7
262.9	260.7	-0.11	28.814	34.871	27.887	1452.3
268.1	265.9	-0.05	28.876	34.881	27.872	1452.7
273.4	271.1	-0.03	28.807	34.892	27.870	1452.9
278.8	276.2	0.02	28.864	34.711	27.892	1453.2
283.7	281.3	0.06	28.000	34.724	27.801	1453.5
288.0	286.5	0.08	28.046	34.734	27.807	1453.7
294.1	291.6	0.12	28.081	34.743	27.813	1454.0
299.2	296.8	0.15	29.120	34.752	27.918	1454.2
304.4	301.7	0.18	29.160	34.763	27.925	1454.5
308.5	306.8	0.21	29.189	34.771	27.931	1454.7

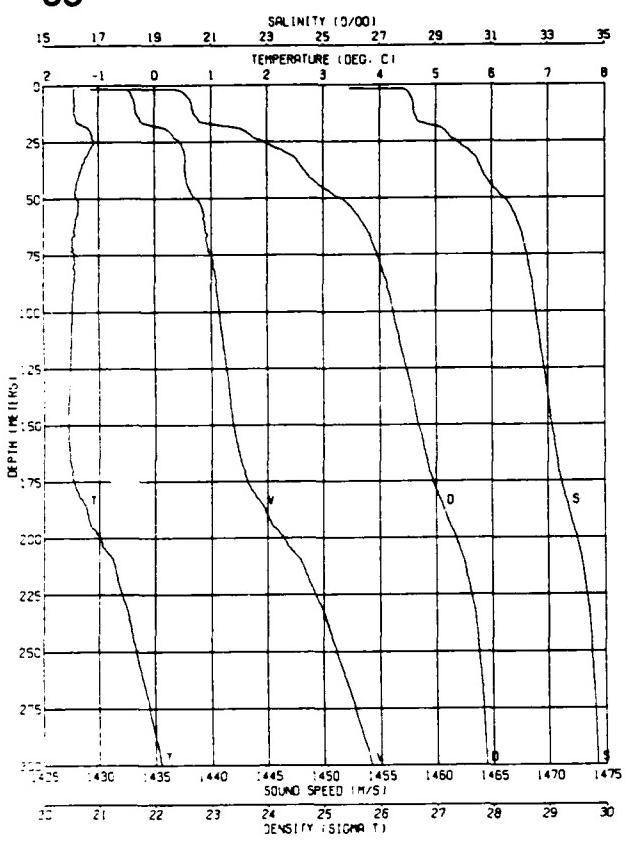
34



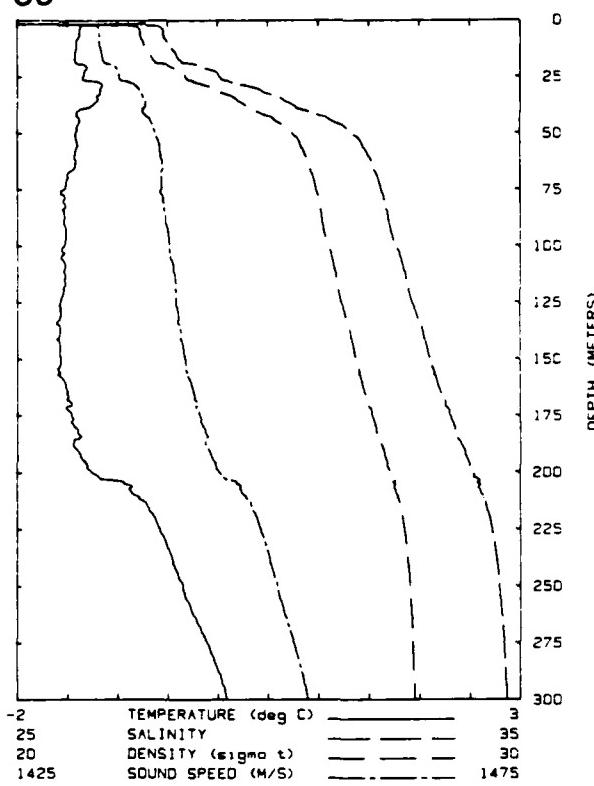
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.4	-1.44	1433.1	22.11	27.49
10.1	-1.44	1433.3	22.32	27.74
15.1	-1.42	1433.2	22.46	27.91
20.3	-1.16	1435.6	23.24	28.89
25.1	-1.22	1436.8	23.95	29.77
30.2	-1.24	1437.0	24.12	29.97
35.0	-1.23	1437.7	24.37	30.28
40.2	-1.32	1437.7	24.60	30.57
45.0	-1.38	1437.6	24.73	30.73
50.2	-1.46	1437.9	24.98	31.03
55.1	-1.37	1439.0	25.35	31.49
60.3	-1.38	1439.3	25.54	31.73
65.2	-1.39	1439.6	25.68	31.90
70.2	-1.41	1439.9	25.81	32.06
75.1	-1.42	1440.1	25.91	32.19
80.2	-1.47	1440.1	26.00	32.30
85.1	-1.48	1440.2	26.06	32.38
90.4	-1.47	1440.4	26.13	32.46
95.3	-1.48	1440.5	26.17	32.51
100.5	-1.49	1440.7	26.23	32.57
110.3	-1.51	1440.9	26.33	32.70
120.1	-1.53	1441.1	26.43	32.82
130.1	-1.54	1441.4	26.53	32.95
140.3	-1.56	1441.7	26.63	33.07
150.3	-1.53	1441.9	26.72	33.19
160.4	-1.51	1442.6	26.82	33.31
170.2	-1.42	1443.4	26.96	33.48
180.2	-1.25	1444.6	27.13	33.70
190.3	-1.07	1445.6	27.28	33.89
200.4	-.85	1447.3	27.44	34.10
210.4	-.67	1448.5	27.56	34.26
220.2	-.58	1449.3	27.64	34.36
230.1	-.46	1450.1	27.71	34.45
240.2	-.38	1450.8	27.76	34.52
250.1	-.25	1451.6	27.79	34.57
260.3	-.17	1452.2	27.81	34.60
270.2	-.09	1452.8	27.84	34.63
280.1	-.01	1453.3	27.85	34.66
290.2	.09	1454.0	27.87	34.69
299.8	.16	1454.5	27.87	34.69

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
35	X	X	237	2253	Helo	71 54.2	145 52.0
36			238	0425	Ship	71 8.1	146 29.8

35



36



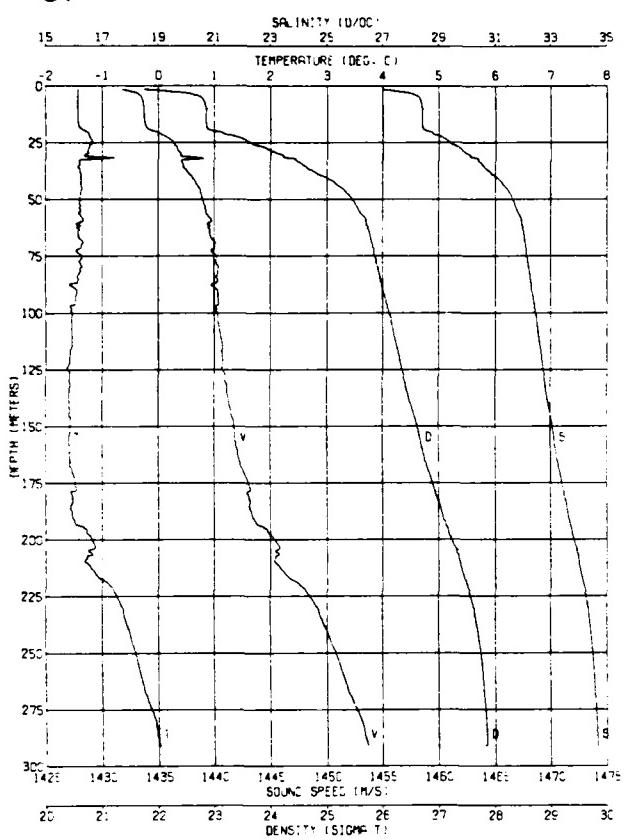
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	-1.45	1433.0	22.59	28.08
10.3	-1.44	1433.3	22.68	28.19
15.1	-1.40	1433.7	22.79	28.32
20.4	-1.13	1436.4	23.63	29.37
25.5	-1.09	1437.4	23.99	29.82
30.3	-1.19	1437.7	24.38	30.30
35.3	-1.30	1437.7	24.59	30.56
40.2	-1.36	1437.8	24.75	30.75
45.3	-1.41	1438.1	24.99	31.05
50.3	-1.39	1438.6	25.33	31.47
55.3	-1.38	1439.3	25.54	31.73
60.5	-1.42	1439.4	25.69	31.91
65.2	-1.46	1439.5	25.80	32.05
70.0	-1.49	1439.6	25.88	32.14
75.4	-1.45	1440.0	25.96	32.25
80.5	-1.47	1440.1	26.03	32.33
85.4	-1.45	1440.4	26.09	32.41
90.4	-1.46	1440.5	26.14	32.47
95.3	-1.48	1440.6	26.20	32.54
100.2	-1.48	1440.7	26.23	32.58
110.3	-1.50	1440.9	26.33	32.70
120.4	-1.52	1441.2	26.42	32.81
130.0	-1.54	1441.4	26.51	32.92
140.1	-1.56	1441.6	26.60	33.03
150.4	-1.57	1441.9	26.68	33.13
160.0	-1.55	1442.3	26.78	33.25
170.2	-1.48	1443.0	26.88	33.39
180.4	-1.37	1443.8	27.03	33.57
190.4	-1.19	1445.1	27.19	33.78
200.3	-.99	1446.5	27.36	33.99
210.3	-.75	1448.0	27.50	34.18
220.5	-.65	1448.9	27.59	34.29
230.3	-.51	1449.8	27.67	34.40
240.1	-.43	1450.5	27.72	34.47
250.1	-.33	1451.2	27.76	34.52
260.3	-.24	1451.8	27.79	34.57
270.3	-.14	1452.5	27.82	34.61
280.0	-.07	1453.0	27.84	34.63
290.3	.03	1453.7	27.86	34.67
300.1	.10	1454.2	27.87	34.69
302.3	.12	1454.3	27.87	34.69

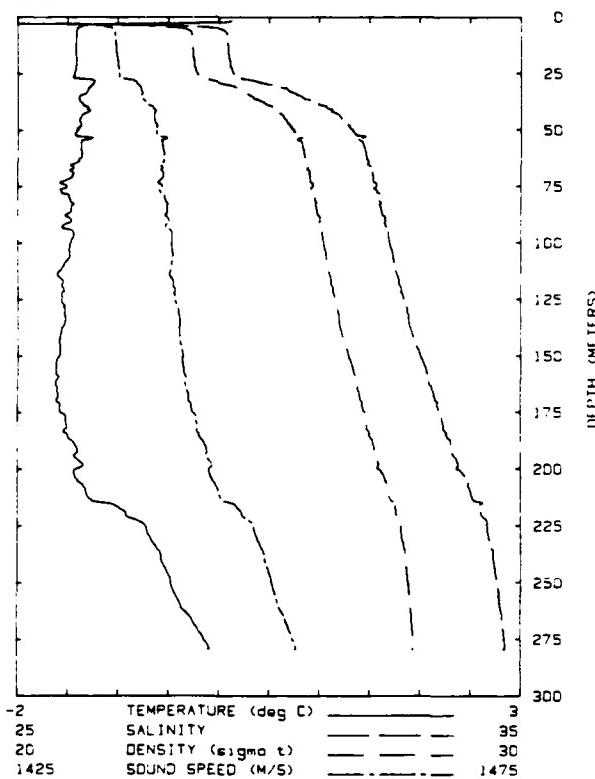
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
1.4	1.4	-0.73	12.852	14.883
5.0	5.0	-1.30	22.864	27.805
13.5	13.4	-1.42	22.805	28.122
21.0	21.6	-1.31	23.385	28.813
30.5	30.3	-1.17	24.212	28.773
39.8	39.8	-1.30	24.716	30.564
49.3	49.1	-1.41	25.383	31.809
58.3	58.0	-1.42	25.630	31.942
67.7	67.3	-1.40	25.719	32.126
77.1	76.6	-1.57	25.754	32.260
86.6	86.0	-1.53	25.870	32.377
95.7	95.0	-1.52	25.945	32.457
105.2	104.5	-1.56	26.033	32.616
114.7	114.0	-1.52	26.146	32.729
123.7	122.8	-1.56	26.197	32.829
133.2	132.3	-1.50	26.288	32.972
142.7	141.7	-1.59	26.385	33.115
151.6	150.7	-1.57	26.486	33.222
161.3	160.1	-1.53	26.819	33.360
171.1	169.8	-1.46	26.798	33.521
180.5	179.1	-1.44	26.936	33.682
189.7	188.3	-1.44	27.060	33.849
198.1	188.1	-1.31	27.287	34.014
209.4	207.8	-0.88	27.804	34.218
218.9	217.2	-0.68	28.078	34.355
228.7	226.9	-0.57	28.258	34.460
238.0	236.1	-0.47	28.393	34.524
247.5	245.5	-0.39	28.489	34.565
257.2	255.0	-0.32	28.582	34.602
266.8	264.3	-0.22	28.705	34.643
275.5	273.2	-0.13	28.811	34.676
284.7	282.2	-0.04	28.810	34.888
293.7	291.2	0.04	28.896	34.720
303.0	300.4	0.10	28.063	34.738
317.1	314.3	0.20	28.172	34.763
333.4	330.4	0.26	28.252	34.763
349.7	346.6	0.31	28.313	34.798
368.1	362.0	0.34	28.354	34.812
382.6	379.0	0.36	28.392	34.825
399.4	395.6	0.39	28.435	34.841
418.2	412.2	0.42	28.479	34.858
433.4	429.3	0.43	28.502	34.863
450.6	448.3	0.44	28.524	34.870
467.4	462.0	0.45	28.542	34.874
484.4	479.7	0.45	28.557	34.878
501.2	498.3	0.46	28.571	34.882
517.0	512.7	0.46	28.581	34.885
534.9	528.5	0.46	28.592	34.888
551.8	546.3	0.46	28.599	34.892

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
37	X	X	240	0014	Helo	71 22.4	148 11.0
38	X		240	0509	Ship	71 15.5	149 6.7

37



38



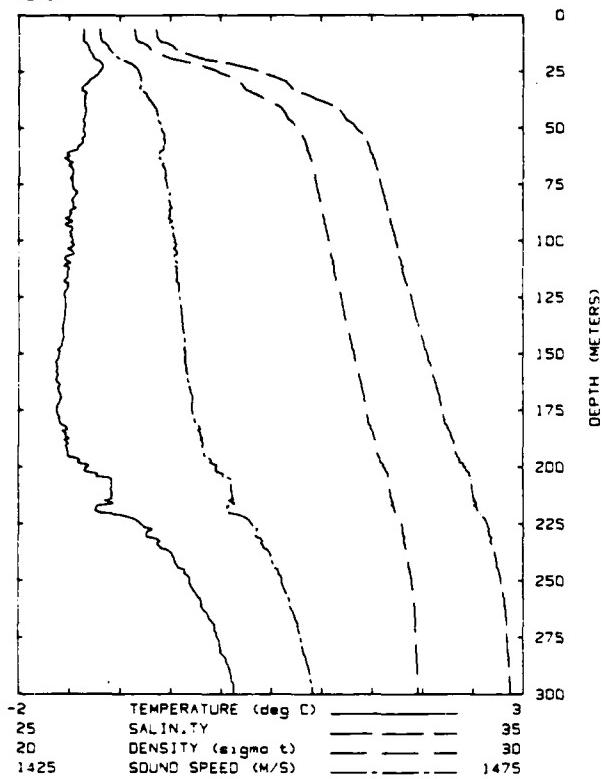
DEPTH (M) T (C) V (M/S) DENSITY S (‰)

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.2	-1.43	1433.5	22.78	28.31
10.1	-1.43	1433.7	22.87	28.43
15.0	-1.43	1433.7	22.86	28.41
20.4	-1.29	1434.9	23.14	28.77
25.1	-1.18	1436.4	23.66	29.41
30.3	-1.29	1437.0	24.20	30.08
35.0	-1.39	1437.3	24.59	30.56
40.3	-1.38	1438.1	24.99	31.04
45.0	-1.36	1438.7	25.26	31.39
50.3	-1.39	1439.0	25.46	31.63
56.0	-1.38	1439.3	25.59	31.79
60.1	-1.37	1439.7	25.70	31.92
65.1	-1.43	1439.6	25.78	32.02
70.0	-1.37	1440.1	25.82	32.08
75.0	-1.35	1440.2	25.87	32.13
80.1	-1.37	1440.4	25.92	32.19
85.4	-1.42	1440.3	25.97	32.26
90.1	-1.45	1440.3	26.00	32.30
95.2	-1.48	1440.4	26.07	32.38
100.2	-1.53	1440.3	26.12	32.44
110.2	-1.54	1440.6	26.21	32.55
120.3	-1.58	1440.7	26.31	32.67
130.0	-1.59	1441.0	26.40	32.78
140.1	-1.59	1441.3	26.50	32.92
150.2	-1.57	1441.8	26.62	33.06
160.1	-1.58	1442.0	26.71	33.17
170.5	-1.53	1442.7	26.83	33.33
180.3	-1.53	1443.0	26.96	33.48
190.0	-1.53	1443.4	27.08	33.63
200.3	-1.18	1445.4	27.24	33.84
210.1	-1.30	1445.4	27.39	34.02
220.5	-.87	1447.7	27.54	34.22
230.2	-.64	1449.1	27.65	34.37
240.1	-.53	1450.0	27.71	34.45
250.1	-.42	1450.6	27.75	34.51
260.1	-.32	1451.5	27.79	34.56
270.3	-.20	1452.2	27.82	34.60
280.0	-.05	1453.1	27.85	34.65
290.3	.01	1453.6	27.86	34.67
291.4	.03	1453.7	27.85	34.65

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.0	1.0	0.13	2.746	2.748	2.149	1406.7
5.9	5.9	-1.41	23.506	29.068	23.386	1424.6
12.0	11.0	-1.42	23.578	29.171	23.469	1434.8
18.4	18.3	-1.41	23.608	29.202	23.495	1434.9
24.8	24.7	-1.43	23.655	29.280	23.557	1435.1
31.5	31.3	-1.28	24.503	30.277	24.361	1437.2
38.1	37.9	-1.37	24.913	30.918	24.081	1437.8
44.6	44.3	-1.37	25.284	31.422	25.289	1438.6
51.3	51.0	-1.42	25.452	31.702	25.516	1438.8
58.0	57.6	-1.37	25.828	31.884	25.863	1439.4
64.5	64.3	-1.39	25.675	31.966	25.730	1439.5
71.3	70.9	-1.45	25.712	32.076	25.820	1439.5
78.0	77.5	-1.56	25.686	32.152	25.884	1439.2
84.7	84.2	-1.47	25.808	32.218	25.935	1439.8
91.4	90.8	-1.46	25.884	32.313	26.012	1440.1
98.1	97.5	-1.44	25.946	32.377	26.063	1440.4
104.8	104.1	-1.48	25.974	32.453	26.126	1440.4
111.5	110.7	-1.55	25.972	32.517	26.179	1440.3
118.2	117.4	-1.55	26.021	32.577	26.228	1440.5
124.9	124.0	-1.56	26.085	32.674	26.307	1440.6
131.6	130.7	-1.53	26.163	32.747	26.365	1441.0
138.2	137.3	-1.55	26.190	32.805	26.413	1441.1
145.0	144.0	-1.59	26.237	32.903	26.493	1441.1
151.7	150.6	-1.59	26.322	33.020	26.587	1441.4
158.4	157.2	-1.62	26.303	33.135	26.682	1441.5
165.1	163.9	-1.60	26.481	33.245	26.771	1441.8
171.8	170.5	-1.60	26.578	33.369	26.871	1442.1
178.6	177.2	-1.52	26.693	33.434	26.921	1442.7
185.2	183.8	-1.54	26.749	33.529	26.999	1442.9
191.9	190.5	-1.41	26.849	33.657	27.089	1443.8
198.6	197.1	-1.37	27.058	33.753	27.175	1444.2
205.3	203.7	-1.42	27.124	33.807	27.302	1444.2
212.1	210.5	-1.31	27.287	34.017	27.387	1445.0
218.9	217.2	-0.98	27.701	34.189	27.516	1446.9
225.6	224.0	-0.74	28.011	34.333	27.623	1448.3
232.6	230.7	-0.67	28.101	34.369	27.649	1448.8
239.3	237.4	-0.57	28.248	34.451	27.711	1449.5
246.0	244.0	-0.52	28.328	34.494	27.744	1449.9
252.7	250.6	-0.47	28.404	34.538	27.777	1450.3
259.4	257.3	-0.40	28.504	34.589	27.815	1450.8
266.2	264.0	-0.30	28.627	34.624	27.846	1451.4
272.7	270.4	-0.21	28.726	34.655	27.859	1452.0
279.4	277.0	-0.11	28.840	34.692	27.884	1452.6
281.7	279.3	-0.10	28.834	34.674	27.869	1452.7

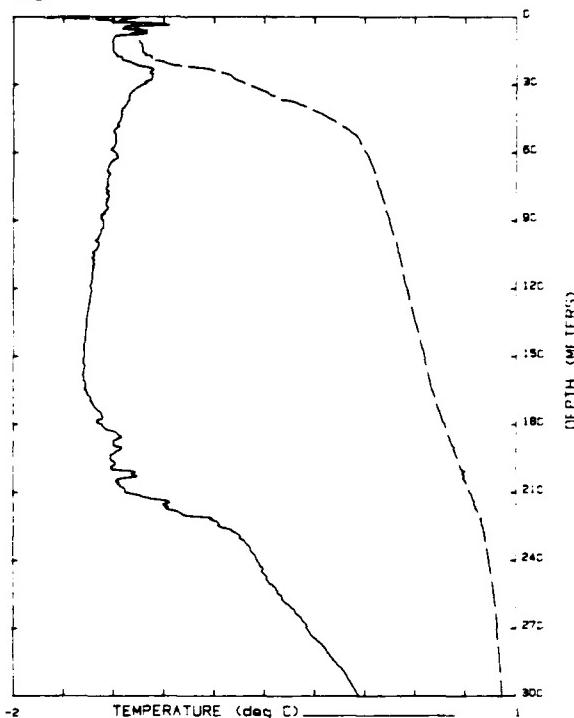
Station Number	ASL Cast	APL Cast	Julian Day	GMT hmmm	Platform	Latitude	Longitude
39	X		240	1001	Ship	71 18.6	149 56.1
40	X		240	1803	Ship	71 42.9	150 2.4

39



-2 TEMPERATURE (deg C) 3  
25 SALINITY 35  
20 DENSITY ( $\sigma_t$ ) 30  
1425 SOUND SPEED (m/sec) 1475

40



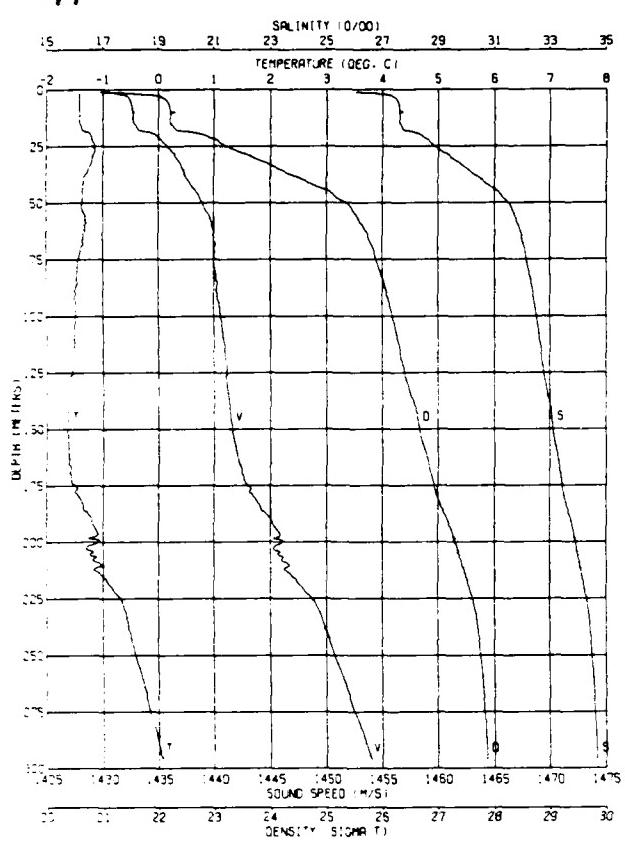
-2 TEMPERATURE (deg C) 3  
25 SALINITY 35

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
5.6	5.6	-1.35	22.532	27.889	22.279	1437.0
17.7	17.6	-1.27	23.085	28.373	22.822	1434.5
29.6	29.4	-1.32	24.494	30.301	24.381	1437.1
41.3	41.0	-1.34	25.225	31.316	25.202	1436.5
53.2	52.9	-1.35	25.594	31.819	25.810	1439.3
65.1	64.7	-1.51	25.647	32.061	25.809	1439.1
77.1	76.6	-1.46	25.788	32.202	25.822	1439.7
89.1	88.5	-1.49	25.875	32.338	26.033	1439.9
101.0	100.4	-1.47	26.003	32.478	26.146	1440.4
113.0	112.2	-1.50	26.080	32.608	26.252	1440.7
125.0	124.1	-1.55	26.165	32.774	26.388	1440.8
136.8	136.0	-1.55	26.259	32.803	26.492	1441.2
148.9	147.6	-1.61	26.321	33.041	26.605	1441.3
160.8	159.8	-1.61	26.453	33.214	26.746	1441.7
172.9	171.6	-1.60	26.571	33.359	26.863	1442.1
184.9	183.5	-1.51	26.758	33.518	26.989	1442.9
197.0	195.5	-1.49	26.912	33.699	27.135	1443.5
209.4	207.8	-1.08	27.457	33.973	27.344	1444.0
222.0	220.2	-1.19	27.493	34.141	27.484	1445.9
234.6	232.7	-0.60	28.149	34.349	27.630	1449.2
246.6	244.6	-0.40	28.444	34.513	27.754	1450.5
258.8	256.8	-0.24	28.650	34.599	27.815	1451.6
271.1	268.8	-0.07	28.650	34.668	27.862	1452.6
282.5	280.1	-0.00	28.936	34.895	27.881	1453.2
294.4	291.0	0.10	29.080	34.735	27.907	1453.9
306.9	304.2	0.14	29.113	34.750	27.918	1454.3
331.6	328.6	0.22	29.216	34.784	27.940	1455.1
354.3	351.1	0.28	29.291	34.808	27.955	1455.8
378.0	374.5	0.33	29.363	34.825	27.967	1456.4
401.6	398.0	0.35	29.397	34.830	27.970	1456.9
425.7	421.7	0.38	29.436	34.843	27.979	1457.4
450.5	448.2	0.40	29.474	34.853	27.988	1457.9
474.0	469.4	0.41	29.504	34.861	27.992	1458.4
487.9	492.9	0.44	29.545	34.873	27.999	1458.9
522.1	518.9	0.45	29.586	34.877	28.003	1459.3
546.3	540.8	0.45	29.583	34.883	28.007	1459.7
571.1	565.3	0.45	29.589	34.888	28.011	1460.2
595.6	590.4	0.46	29.619	34.892	28.014	1460.6
610.5	612.1	0.44	29.622	34.897	28.019	1460.9
643.2	636.5	0.42	29.611	34.800	28.022	1461.2
666.2	659.2	0.39	29.603	34.801	28.025	1461.5
680.0	682.7	0.35	29.585	34.807	28.031	1461.7
711.7	704.0	0.35	29.587	34.807	28.032	1462.0

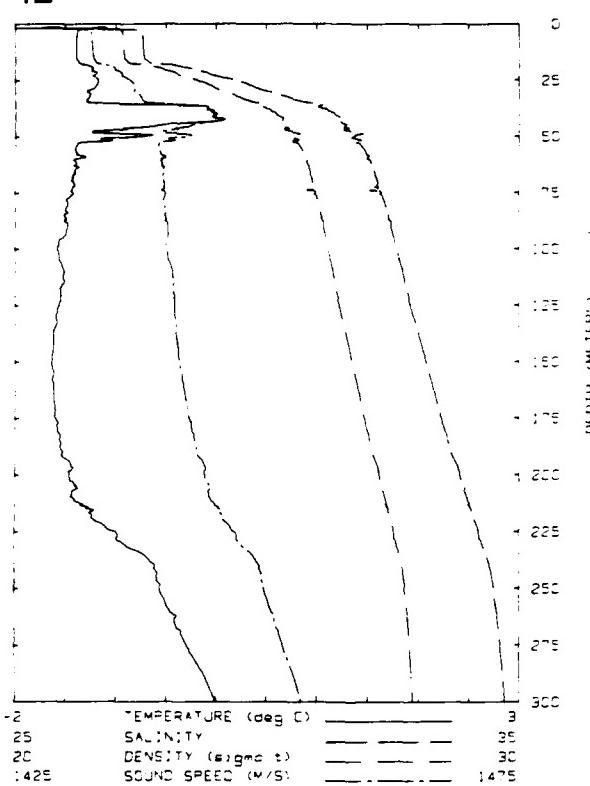
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.4	1.4	-1.27	21.044	25.838	20.612	1430.6
6.1	6.1	-1.34	22.388	27.488	22.080	1432.8
13.1	13.0	-1.40	22.388	27.559	22.166	1432.7
20.4	20.3	-1.34	22.802	27.777	22.342	1433.4
27.7	27.5	-1.17	23.889	28.352	23.812	1436.5
34.8	34.6	-1.29	24.334	30.055	24.182	1436.9
42.0	41.8	-1.35	24.934	30.922	24.884	1438.0
49.0	48.8	-1.38	25.341	31.504	25.356	1438.7
56.2	55.9	-1.38	25.629	31.903	25.678	1439.3
63.5	63.1	-1.38	25.786	32.076	25.818	1439.7
70.7	70.3	-1.43	25.817	32.187	25.917	1439.8
78.0	77.5	-1.44	25.885	32.305	26.005	1439.9
85.2	84.7	-1.44	25.983	32.407	26.087	1440.2
92.4	91.6	-1.45	26.015	32.483	26.156	1440.3
99.7	99.0	-1.49	26.074	32.600	26.245	1440.5
106.9	106.2	-1.52	26.109	32.876	26.308	1440.5
114.2	113.4	-1.52	26.185	32.753	26.370	1440.7
121.4	120.6	-1.54	26.219	32.838	26.439	1441.9
128.7	127.8	-1.55	26.268	32.911	26.499	1441.1
135.9	134.9	-1.56	26.316	32.992	26.565	1441.2
143.2	142.2	-1.57	26.375	33.078	26.634	1441.4
150.4	149.3	-1.58	26.437	33.186	26.708	1441.6
157.6	156.5	-1.57	26.495	33.239	26.765	1441.9
164.9	163.7	-1.56	26.560	33.313	26.825	1442.1
172.2	171.0	-1.54	26.654	33.408	26.901	1442.5
179.7	178.3	-1.47	26.803	33.527	26.985	1443.1
187.0	185.6	-1.37	26.871	33.650	27.092	1443.8
194.5	193.1	-1.38	27.071	33.793	27.208	1444.1
202.1	200.6	-1.41	27.143	33.923	27.314	1444.3
209.9	208.3	-1.36	27.274	34.037	27.405	1444.8
217.7	216.0	-1.06	27.593	34.157	27.483	1446.4
225.5	223.7	-0.79	27.984	34.318	27.813	1448.1
232.9	231.1	-0.64	28.140	34.380	27.865	1449.0
240.3	238.4	-0.56	28.268	34.455	27.713	1449.6
247.8	245.9	-0.52	28.343	34.509	27.755	1450.0
255.5	253.3	-0.43	28.450	34.549	27.784	1450.6
263.1	260.8	-0.35	28.558	34.588	27.819	1451.1
270.6	268.3	-0.26	28.682	34.620	27.840	1451.7
278.1	275.8	-0.19	28.745	34.654	27.857	1452.2
285.9	283.4	-0.10	28.848	34.686	27.878	1452.8
292.8	290.3	-0.02	28.938	34.710	27.893	1453.3
299.3	296.7	0.03	28.986	34.725	27.903	1453.6
306.1	303.4	0.08	29.052	34.739	27.911	1454.0
313.0	312.3	0.18	29.157	34.785	27.927	1454.6
327.7	324.8	0.25	29.241	34.788	27.942	1455.2
341.6	338.6	0.34	29.347	34.812	27.956	1455.9
355.7	352.5	0.37	29.387	34.821	27.962	1456.2
369.7	366.4	0.38	29.416	34.833	27.970	1456.6
382.5	378.8	0.39	29.432	34.842	27.977	1456.8

Station Number	ASL Cast	APL Cast	Julian Day	GMT hmmm	Platform	Latitude	Longitude
41	X	X	240	1816	Hele	71 42.9	149 16.5
42			241	0144	Ship	71 57.9	149 58.5

41



42



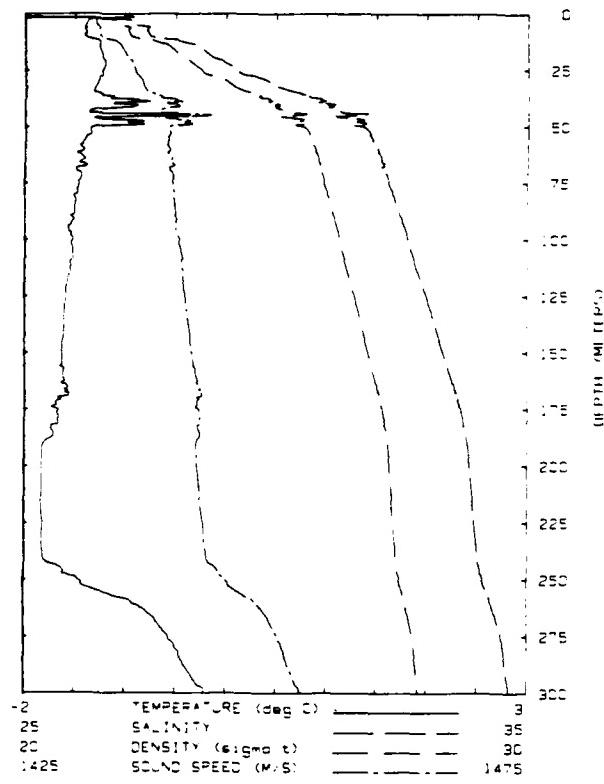
DEPTH (M) T (C) V (M/S) DENSITY S (‰)

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.2	-1.41	1432.5	22.16	27.55
10.1	-1.41	1432.7	22.22	27.61
15.3	-1.39	1432.8	22.23	27.64
20.3	-1.20	1434.8	22.85	28.40
25.1	-1.16	1435.8	23.24	28.89
30.3	-1.18	1436.6	23.73	29.49
35.1	-1.25	1437.2	24.15	30.01
40.5	-1.32	1437.8	24.64	30.62
45.0	-1.35	1438.4	25.05	31.13
50.3	-1.36	1439.0	25.38	31.53
55.2	-1.31	1439.5	25.52	31.71
60.1	-1.31	1439.8	25.65	31.87
65.2	-1.33	1440.0	25.75	31.99
70.3	-1.39	1440.0	25.85	32.11
75.1	-1.43	1440.0	25.89	32.16
80.1	-1.45	1440.1	25.96	32.25
85.0	-1.44	1440.3	26.02	32.32
90.3	-1.46	1440.4	26.07	32.39
95.2	-1.48	1440.5	26.13	32.46
100.1	-1.49	1440.6	26.18	32.52
110.2	-1.50	1440.8	26.27	32.62
120.1	-1.52	1441.1	26.36	32.74
130.0	-1.59	1441.1	26.45	32.86
140.2	-1.61	1441.4	26.59	33.03
150.3	-1.63	1441.6	26.67	33.12
160.0	-1.61	1442.0	26.78	33.25
170.4	-1.56	1442.6	26.88	33.38
180.0	-1.41	1443.6	26.99	33.52
190.0	-1.20	1445.0	27.16	33.74
200.2	-1.10	1446.0	27.30	33.92
210.4	-1.01	1446.6	27.42	34.06
220.1	-.85	1447.8	27.55	34.24
230.2	-.61	1449.3	27.65	34.37
240.2	-.51	1450.1	27.70	34.45
250.2	-.42	1450.7	27.75	34.51
260.3	-.30	1451.5	27.79	34.56
270.3	-.21	1452.2	27.81	34.59
280.1	-.09	1452.9	27.84	34.64
290.3	.01	1453.6	27.86	34.66
296.2	.08	1454.0	27.86	34.68

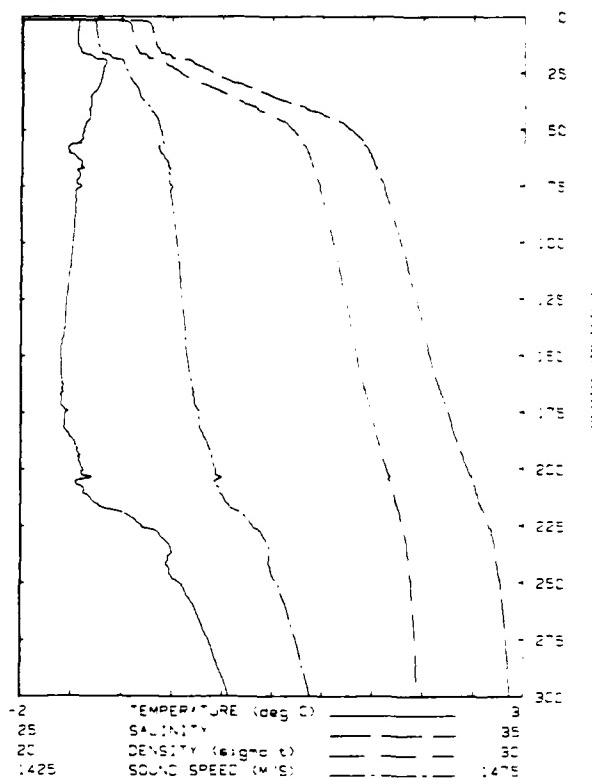
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	_SOUND VELOCITY (m/sec)
1.4	1.4	-1.18	20.311	24.587	19.784	1429.8
1.6	1.6	-1.21	20.183	24.455	19.650	1429.3
1.8	1.8	-1.18	20.022	24.205	19.456	1429.1
2.0	1.7	-1.19	20.281	24.572	19.752	1429.5
2.2	1.7	-1.16	19.729	23.809	19.136	1428.6
2.5	1.7	-1.10	19.217	23.085	18.552	1427.9
3.0	1.7	-1.04	18.705	22.362	18.052	1427.2
3.5	1.7	-0.98	18.193	21.639	17.552	1426.5
4.0	1.7	-0.92	17.681	20.916	17.052	1425.8
5.0	1.7	-0.86	17.169	20.193	16.552	1425.0
6.0	1.7	-0.80	16.657	19.470	16.052	1424.2
7.0	1.7	-0.74	16.145	18.747	15.552	1423.5
8.0	1.7	-0.68	15.633	18.024	15.052	1422.7
10.0	1.7	-0.62	15.121	17.291	14.552	1421.9
15.0	1.7	-0.54	14.609	16.568	14.052	1421.1
20.0	1.7	-0.46	14.097	15.845	13.552	1420.3
25.0	1.7	-0.38	13.585	15.122	13.052	1419.5
30.0	1.7	-0.30	13.073	14.399	12.552	1418.7
35.0	1.7	-0.22	12.561	13.676	12.052	1417.9
40.0	1.7	-0.14	12.049	12.953	11.552	1417.1
45.0	1.7	-0.06	11.537	12.230	11.052	1416.3
50.0	1.7	0.02	11.025	11.507	10.552	1415.5
60.0	1.7	0.10	10.513	10.784	10.052	1414.7
70.0	1.7	0.18	10.001	10.061	9.552	1413.9
80.0	1.7	0.26	9.489	9.338	9.052	1413.1
90.0	1.7	0.34	8.977	8.605	8.552	1412.3
100.0	1.7	0.42	8.465	7.872	8.052	1411.5
110.0	1.7	0.50	7.953	7.139	7.552	1410.7
120.0	1.7	0.58	7.441	6.406	7.052	1410.0
130.0	1.7	0.66	6.929	5.673	6.552	1409.2
140.0	1.7	0.74	6.417	5.030	6.052	1408.4
150.0	1.7	0.82	5.905	4.387	5.552	1407.6
160.0	1.7	0.90	5.393	3.744	5.052	1406.8
170.0	1.7	0.98	4.881	3.101	4.552	1406.0
180.0	1.7	1.06	4.369	2.458	4.052	1405.2
190.0	1.7	1.14	3.857	1.815	3.552	1404.4
200.0	1.7	1.22	3.345	1.172	3.052	1403.6
210.0	1.7	1.30	2.833	540	2.552	1402.8
220.0	1.7	1.38	2.321	541	2.052	1402.0
230.0	1.7	1.46	1.809	542	1.552	1401.2
240.0	1.7	1.54	1.297	543	1.052	1400.4
250.0	1.7	1.62	785	544	540	1400.0
260.0	1.7	1.70	274	545	540	1400.0
270.0	1.7	1.78	223	546	540	1400.0
280.0	1.7	1.86	172	547	540	1400.0
290.0	1.7	1.94	121	548	540	1400.0
296.2	1.7	2.02	70	549	540	1400.0
300.0	1.7	2.10	19	550	540	1400.0
306.2	1.7	2.18	48	551	540	1400.0
312.2	1.7	2.26	97	552	540	1400.0
318.2	1.7	2.34	146	553	540	1400.0
324.2	1.7	2.42	195	554	540	1400.0
330.2	1.7	2.50	244	555	540	1400.0
336.2	1.7	2.58	293	556	540	1400.0
342.2	1.7	2.66	342	557	540	1400.0
348.2	1.7	2.74	391	558	540	1400.0
354.2	1.7	2.82	440	559	540	1400.0
360.2	1.7	2.90	489	560	540	1400.0
366.2	1.7	2.98	538	561	540	1400.0
372.2	1.7	3.06	587	562	540	1400.0
378.2	1.7	3.14	636	563	540	1400.0
384.2	1.7	3.22	685	564	540	1400.0
390.2	1.7	3.30	734	565	540	1400.0
396.2	1.7	3.38	783	566	540	1400.0
402.2	1.7	3.46	832	567	540	1400.0
408.2	1.7	3.54	881	568	540	1400.0
414.2	1.7	3.62	930	569	540	1400.0
420.2	1.7	3.70	979	570	540	1400.0
426.2	1.7	3.78	1028	571	540	1400.0
432.2	1.7	3.86	1077	572	540	1400.0
438.2	1.7	3.94	1126	573	540	1400.0
444.2	1.7	4.02	1175	574	540	1400.0
450.2	1.7	4.10	1224	575	540	1400.0
456.2	1.7	4.18	1273	576	540	1400.0
462.2	1.7	4.26	1322	577	540	1400.0
468.2	1.7	4.34	1371	578	540	1400.0
474.2	1.7	4.42	1420	579	540	1400.0
480.2	1.7	4.50	1469	580	540	1400.0
486.2	1.7	4.58	1518	581	540	1400.0
492.2	1.7	4.66	1567	582	540	1400.0
498.2	1.7	4.74	1616	583	540	1400.0
504.2	1.7	4.82	1665	584	540	1400.0
510.2	1.7	4.90	1714	585	540	1400.0
516.2	1.7	4.98	1763	586	540	1400.0
522.2	1.7	5.06	1812	587	540	1400.0
528.2	1.7	5.14	1861	588	540	1400.0
534.2	1.7	5.22	1910	589	540	1400.0
540.2	1.7	5.30	1959	590	540	1400.0
546.2	1.7	5.38	2008	591	540	1400.0
552.2	1.7	5.46	2057	592	540	1400.0
558.2	1.7	5.54	2106	593	540	1400.0
564.2	1.7	5.62	2155	594	540	1400.0
570.2	1.7	5.70	2204	595	540	1400.0
576.2	1.7	5.78	2253	596	540	1400.0
582.2	1.7	5.86	2302	597	540	1400.0
588.2	1.7	5.94	2351	598	540	1400.0
594.2	1.7	6.02	2399	599	540	1400.0
600.0	1.7	6.10	2448	600	540	1400.0

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
43	X		241	0548	Ship	72 9.8	150 1.7
44	X		241	1101	Ship	72 24.9	150 39.9

43



44

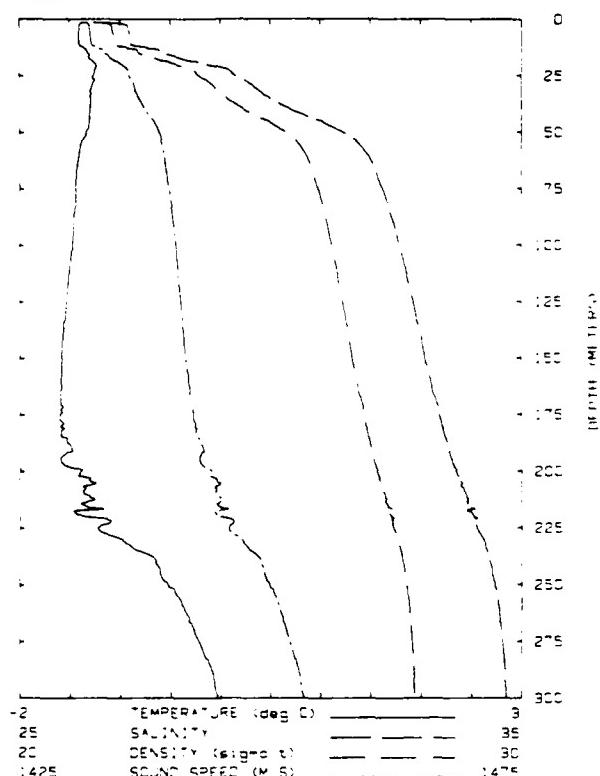


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY (m/sec)
1.4	1.4	-0.99	18.153	21.620	17.370	1426.5
4.2	4.2	-1.38	22.112	27.197	21.841	1432.1
10.9	10.9	-1.36	22.404	27.838	22.230	1433.0
17.1	17.0	-1.23	23.288	28.594	23.001	1435.0
23.5	23.4	-1.20	23.889	29.101	23.410	1435.9
29.0	29.0	-1.26	24.181	28.822	23.983	1436.7
36.3	36.1	-1.24	24.762	30.583	24.608	1437.9
42.7	42.5	-1.29	25.183	31.200	25.107	1438.5
49.1	49.0	-0.84	25.975	31.803	25.583	1441.6
55.5	55.2	-1.40	25.828	31.816	25.689	1439.3
61.9	61.5	-1.45	25.866	32.026	25.780	1438.2
68.0	67.6	-1.37	25.835	32.167	25.692	1438.0
74.2	73.7	-1.44	25.845	32.243	25.955	1439.8
80.3	79.8	-1.46	25.895	32.335	26.030	1439.9
86.4	85.8	-1.50	25.830	32.420	26.099	1440.0
92.5	91.9	-1.51	25.869	32.510	26.173	1440.1
98.8	98.0	-1.53	26.040	32.803	26.249	1440.2
104.7	104.0	-1.52	26.111	32.877	26.308	1440.5
110.8	110.1	-1.54	26.161	32.766	26.381	1440.6
116.6	116.0	-1.55	26.217	32.855	26.453	1440.8
122.8	122.0	-1.58	26.279	32.987	26.544	1440.9
128.8	127.9	-1.59	26.324	33.040	26.604	1441.1
134.7	133.8	-1.60	26.376	33.121	26.670	1441.2
140.6	139.6	-1.61	26.434	33.200	26.734	1441.4
146.5	145.5	-1.62	26.481	33.274	26.794	1441.5
152.5	151.4	-1.62	26.548	33.383	26.866	1441.7
158.3	157.2	-1.80	26.623	33.439	26.927	1442.0
164.2	163.0	-1.80	26.879	33.514	26.988	1442.2
170.2	168.9	-1.55	26.790	33.614	27.088	1442.7
176.7	174.7	-1.69	26.735	33.894	27.137	1442.2
182.0	180.8	-1.65	26.814	33.754	27.184	1442.8
188.4	187.0	-1.70	26.810	33.802	27.224	1442.5
194.9	193.4	-1.82	26.746	33.842	27.280	1442.1
201.5	200.0	-1.82	26.771	33.889	27.282	1442.2
208.0	206.4	-1.82	26.782	33.896	27.304	1442.4
214.6	212.9	-1.62	26.810	33.921	27.324	1442.5
221.1	219.3	-1.62	26.828	33.939	27.338	1442.8
227.7	225.8	-1.80	26.863	33.965	27.358	1442.9
234.3	232.5	-1.82	26.877	33.993	27.382	1442.8
241.2	239.3	-1.81	26.908	34.019	27.403	1443.1
248.3	246.3	-1.59	27.124	34.072	27.440	1444.3
255.5	253.4	-1.36	27.398	34.184	27.524	1445.7
262.6	260.4	-0.91	27.857	34.293	27.597	1446.1
270.2	267.9	-0.89	28.122	34.405	27.676	1448.4
277.6	275.2	-0.56	28.308	34.481	27.743	1450.3
284.7	282.3	-0.46	26.435	34.545	27.782	1450.8
291.9	289.4	-0.37	26.549	34.583	27.816	1451.5
299.0	296.4	-0.27	26.671	34.635	27.846	1452.1
311.0	306.3	-0.09	26.864	34.663	27.876	1453.2

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.3	1.3	-1.24	19.726	23.488	18.880	1427.8
5.3	5.3	-1.43	22.401	27.593	22.194	1432.5
11.8	11.8	-1.44	22.456	27.870	22.256	1432.7
18.2	18.1	-1.28	22.817	28.009	22.529	1434.0
24.5	24.4	-1.19	23.449	28.767	23.139	1435.5
30.9	30.7	-1.23	23.846	29.473	23.710	1436.4
37.1	36.9	-1.31	24.410	30.178	24.282	1437.0
43.4	43.2	-1.32	25.005	30.890	24.838	1438.2
49.8	49.5	-1.38	25.350	31.518	25.367	1438.7
56.2	55.9	-1.41	25.580	31.867	25.650	1439.1
62.6	62.2	-1.46	25.830	31.978	25.739	1439.2
69.0	68.8	-1.44	25.745	32.110	25.848	1439.6
75.5	75.0	-1.41	25.889	32.144	25.955	1440.0
81.9	81.4	-1.44	25.800	32.323	26.020	1440.0
88.3	87.7	-1.45	25.853	32.402	26.084	1440.2
94.8	94.2	-1.47	26.001	32.482	26.149	1440.3
101.2	100.6	-1.49	26.055	32.570	26.221	1440.5
107.5	106.8	-1.50	26.113	32.683	26.297	1440.6
113.9	113.1	-1.52	26.152	32.729	26.350	1440.7
120.2	119.4	-1.53	26.208	32.816	26.421	1440.9
126.6	125.7	-1.54	26.258	32.895	26.486	1441.0
132.0	131.9	-1.56	26.298	32.882	26.540	1441.2
139.1	138.1	-1.57	26.329	33.012	26.581	1441.3
145.3	144.2	-1.58	26.365	33.084	26.640	1441.4
151.3	150.3	-1.60	26.408	33.153	26.696	1441.5
157.5	156.4	-1.60	26.457	33.212	26.743	1441.7
163.6	162.4	-1.59	26.535	33.304	26.817	1442.0
170.3	169.0	-0.95	26.812	33.413	26.906	1442.2
177.5	176.2	-1.56	26.716	33.521	26.993	1442.6
184.7	183.3	-1.54	26.804	33.614	27.088	1442.9
192.0	190.6	-1.45	26.971	33.732	27.181	1443.7
198.4	197.8	-1.40	27.108	33.882	27.285	1444.2
206.7	205.1	-1.41	27.179	33.986	27.349	1444.4
214.1	212.4	-1.32	27.351	34.083	27.449	1445.1
221.5	219.8	-0.95	27.768	34.243	27.559	1447.2
229.1	227.3	-0.66	28.114	34.371	27.650	1448.9
236.9	235.0	-0.51	28.291	34.437	27.697	1449.0
244.5	242.5	-0.54	28.311	34.495	27.746	1449.0
251.3	249.3	-0.45	28.425	34.538	27.776	1450.4
258.3	256.2	-0.33	28.593	34.585	27.809	1451.1
265.7	263.4	-0.25	28.656	34.612	27.826	1451.7
273.0	270.7	-0.18	28.741	34.647	27.851	1452.1
280.5	278.1	-0.10	28.828	34.689	27.885	1452.6
288.0	285.5	-0.05	28.898	34.835	27.883	1453.0
294.8	292.3	0.02	28.977	34.721	27.901	1453.5
300.8	298.3	0.06	29.020	34.727	27.903	1453.6
308.3	305.6	0.12	29.094	34.746	27.915	1454.2
316.1	313.3	0.19	29.160	34.787	27.929	1454.7
324.5	321.7	0.24	29.224	34.787	27.937	1455.1

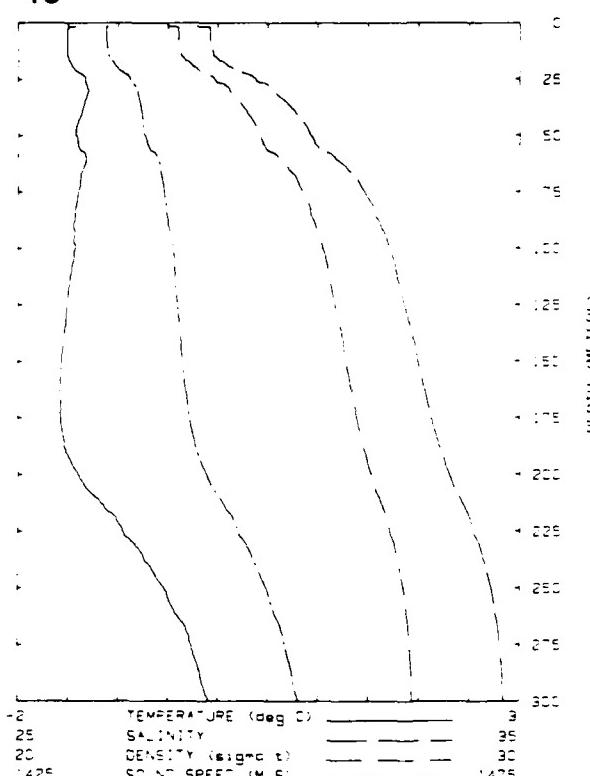
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
45	X		241	1636	Ship	72 41.5	151 13.9
46	X		242	0200	Ship	73 8.6	151 23.0

45



-2 TEMPERATURE (deg C) 3  
25 SALINITY 35  
20 DENSITY (sigma t) 30  
1425 SOUND SPEED (m/s) 1475

46



-2 TEMPERATURE (deg C) 3  
25 SALINITY 35  
20 DENSITY (sigma t) 30  
1425 SOUND SPEED (m/s) 1475

PRESSURE (dbar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (m/sec.)
-----------------	-----------	---------------------	----------------------	----------	---------	---------------------------

1.6	1.6	-1.36	21.786	26.719	21.486	1431.6
4.5	4.5	-1.41	22.097	27.163	21.846	1432.0
8.6	8.5	-1.41	24.125	27.202	21.877	1432.1
14.7	14.6	-1.32	22.817	27.791	22.345	1433.4
19.8	19.7	-1.25	23.331	26.870	23.082	1435.0
25.0	24.8	-1.26	23.783	29.205	23.559	1435.9
30.1	29.9	-1.28	24.063	28.681	23.880	1436.4
35.3	35.1	-1.29	24.294	30.001	24.138	1436.9
40.5	40.3	-1.30	24.808	30.434	24.489	1437.5
45.7	45.4	-1.31	25.057	31.052	24.989	1438.4
50.9	50.6	-1.35	25.361	31.498	25.350	1438.9
56.0	55.7	-1.39	25.551	31.804	25.599	1439.2
61.2	60.9	-1.41	25.865	31.978	25.739	1439.4
66.5	66.1	-1.43	25.734	32.081	25.832	1439.5
71.6	71.2	-1.44	25.788	32.171	25.897	1439.7
77.0	76.5	-1.44	25.862	32.270	25.977	1439.9
82.2	81.7	-1.44	25.821	32.350	26.041	1440.1
87.5	86.9	-1.46	25.982	32.419	26.098	1440.2
92.6	92.0	-1.48	26.016	32.494	26.159	1440.3
97.9	97.3	-1.47	26.050	32.547	26.201	1440.5
103.1	102.4	-1.48	26.087	32.609	26.252	1440.6
108.4	107.7	-1.50	26.120	32.667	26.299	1440.7
113.7	112.9	-1.51	26.153	32.724	26.346	1440.8
119.0	118.2	-1.52	26.187	32.779	26.391	1440.9
124.2	123.4	-1.53	26.223	32.840	26.440	1441.0
129.6	128.7	-1.54	26.253	32.886	26.478	1441.1
134.7	133.8	-1.56	26.272	32.928	26.512	1441.1
140.0	138.0	-1.57	26.315	32.989	26.569	1441.3
145.2	144.2	-1.58	26.342	33.042	26.605	1441.4
150.5	149.5	-1.59	26.374	33.088	26.643	1441.5
155.6	154.6	-1.58	26.415	33.141	26.685	1441.6
161.0	159.8	-1.59	26.454	33.200	26.734	1441.8
166.3	165.1	-1.60	26.484	33.242	26.767	1441.9
171.6	170.3	-1.60	26.538	33.320	26.831	1442.0
177.0	175.7	-1.61	26.578	33.377	26.877	1442.2
182.3	181.3	-1.62	26.656	33.429	26.919	1442.6
187.6	186.5	-1.54	26.739	33.514	26.987	1442.9
193.3	192.3	-1.55	26.781	33.579	27.039	1443.0
198.6	198.3	-1.51	26.871	33.661	27.105	1443.4
203.8	204.9	-1.27	27.200	33.834	27.241	1444.9
212.0	211.2	-1.30	27.227	33.803	27.285	1444.9
218.5	216.6	-1.16	27.359	33.820	27.304	1445.7
224.0	223.0	-1.13	27.523	34.106	27.455	1446.2
231.0	229.1	-1.04	27.888	34.221	27.544	1446.9
237.2	235.3	-0.80	27.870	34.330	27.622	1448.3
243.3	241.3	-0.83	28.183	34.401	27.673	1449.2
249.3	247.2	-0.58	28.241	34.448	27.707	1449.6
255.1	253.0	-0.46	28.382	34.491	27.730	1450.3
260.8	258.6	-0.39	28.480	34.542	27.776	1450.8
266.6	264.4	-0.31	28.577	34.577	27.801	1451.3
272.4	270.3	-0.26	28.643	34.604	27.820	1451.7
278.0	276.4	-0.20	28.717	34.633	27.841	1452.1
285.0	282.4	-0.13	28.800	34.662	27.861	1452.6
291.3	288.8	-0.08	28.849	34.685	27.861	1452.9
298.6	294.0	-0.05	28.888	34.680	27.871	1453.1
301.8	299.3	-0.03	28.925	34.698	27.884	1453.4
307.5	304.8	0.03	28.888	34.726	27.904	1453.8

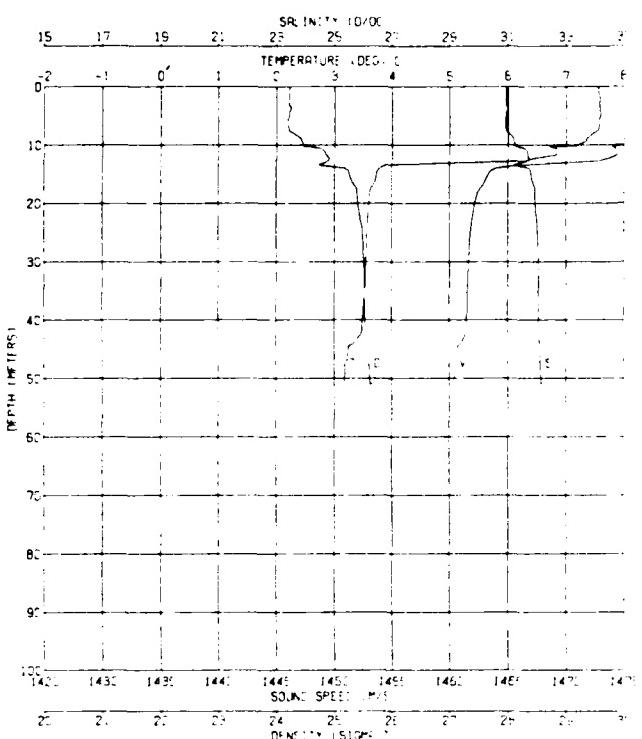
PRESSURE (dbar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (m/sec.)
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1.7	1.7	-1.43	23.142	28.505	23.004	1433.8
1.8	1.8	-1.42	23.136	28.582	22.993	1433.8
2.6	2.6	-1.50	23.280	28.851	23.211	1433.8
7.0	7.5	-1.51	23.271	28.846	23.208	1433.8
12.0	12.7	-1.51	23.310	28.897	23.249	1434.0
18.0	18.8	-1.47	23.549	29.176	23.474	1434.6
25.0	25.7	-1.33	24.105	29.788	23.866	1436.3
32.0	32.7	-1.32	24.446	30.235	24.328	1437.0
40.0	39.0	-1.36	24.848	30.552	24.585	1437.3
46.0	46.6	-1.42	24.778	30.786	24.776	1437.5
53.0	53.5	-1.40	24.814	30.945	24.904	1437.9
58.0	59.3	-1.33	25.240	31.322	25.207	1438.9
65.0	65.0	-1.35	25.433	31.583	25.426	1439.2
71.2	70.6	-1.30	25.571	31.811	25.604	1439.5
76.5	76.1	-1.40	25.656	31.949	25.716	1439.6
81.0	81.3	-1.43	25.744	32.088	25.829	1439.8
87.1	86.6	-1.43	25.801	32.171	25.897	1440.0
92.5	91.8	-1.44	25.878	32.285	25.989	1441.2
97.7	97.1	-1.44	25.947	32.378	26.064	1441.4
103.1	102.4	-1.44	26.013	32.465	26.135	1441.6
108.3	107.6	-1.46	26.050	32.532	26.189	1441.6
113.0	112.0	-1.49	26.071	32.574	26.224	1441.7
119.2	118.4	-1.49	26.116	32.651	26.286	1441.8
124.0	123.9	-1.51	26.151	32.709	26.334	1441.9
130.2	129.3	-1.52	26.187	32.771	26.385	1441.9
135.5	134.6	-1.53	26.226	32.835	26.437	1441.2
140.0	139.0	-1.54	26.261	32.880	26.481	1441.3
146.3	145.3	-1.55	26.297	32.850	26.530	1441.4
151.7	150.6	-1.56	26.324	32.886	26.588	1441.5
157.1	156.0	-1.57	26.362	33.055	26.616	1441.6
162.5	161.3	-1.58	26.381	33.089	26.651	1441.7
168.0	167.7	-1.58	26.433	33.154	26.686	1441.9
173.3	172.0	-1.58	26.482	33.216	26.746	1442.0
178.0	177.5	-1.57	26.533	33.274	26.793	1442.3
184.3	182.9	-1.55	26.605	33.347	26.852	1442.5
189.0	188.4	-1.53	26.679	33.425	26.915	1442.6
194.0	194.0	-1.48	26.786	33.508	26.980	1443.3
201.2	199.8	-1.40	26.914	33.588	27.051	1443.8
206.7	205.1	-1.33	27.049	33.686	27.128	1444.4
212.3	210.7	-1.21	27.251	33.832	27.234	1445.3
218.0	216.3	-1.10	27.428	33.951	27.327	1446.0
223.7	222.0	-0.98	27.593	34.048	27.402	1446.8
229.4	227.6	-0.92	27.704	34.119	27.457	1447.3
235.3	233.4	-0.78	28.818	34.239	27.548	1448.2
241.4	239.5	-0.69	28.947	34.314	27.605	1448.8
247.7	245.6	-0.81	29.189	34.382	27.637	1449.4
253.4	251.3	-0.92	29.303	34.455	27.712	1450.0
259.1	256.9	-0.47	29.389	34.487	27.735	1450.3
264.8	262.4	-0.40	29.467	34.528	27.768	1450.8
270.2	267.9	-0.31	29.572	34.571	27.796	1451.4
275.0	273.4	-0.28	29.625	34.598	27.816	1451.7
281.1	278.3	-0.24	29.674	34.621	27.833	1452.0
287.7	285.2	-0.19	29.741	34.645	27.850	1452.3
293.2	290.2	-0.18	29.781	34.660	27.860	1452.6
299.4	295.0	-0.12	29.824	34.672	27.868	1452.9
304.3	301.6	-0.07	29.882	34.688	27.887	1453.2
311.5	308.0	0.01	29.974	34.716	27.897	1453.7

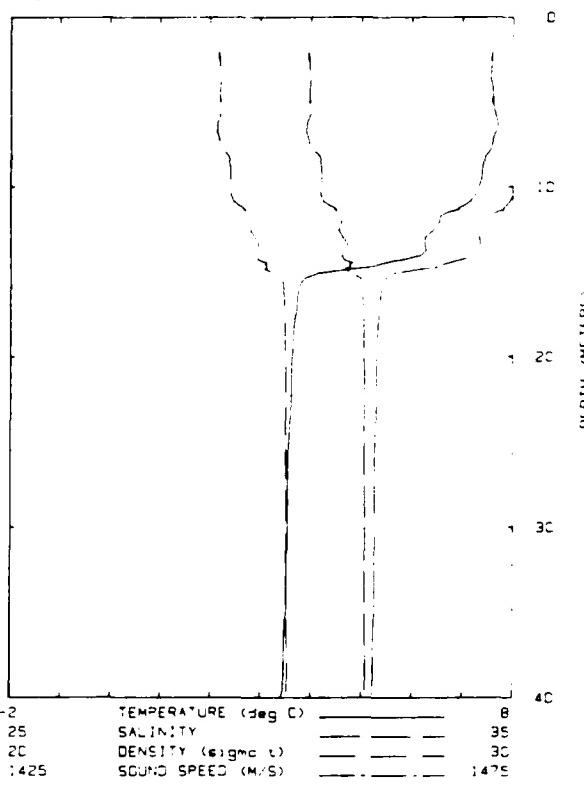
Station ASL APL Julian GMT  
Number Cast Cast Day hhmm Platform Latitude Longitude

47 X X 245 0524 Ship 70 50.7 160 34.9  
48

47



48



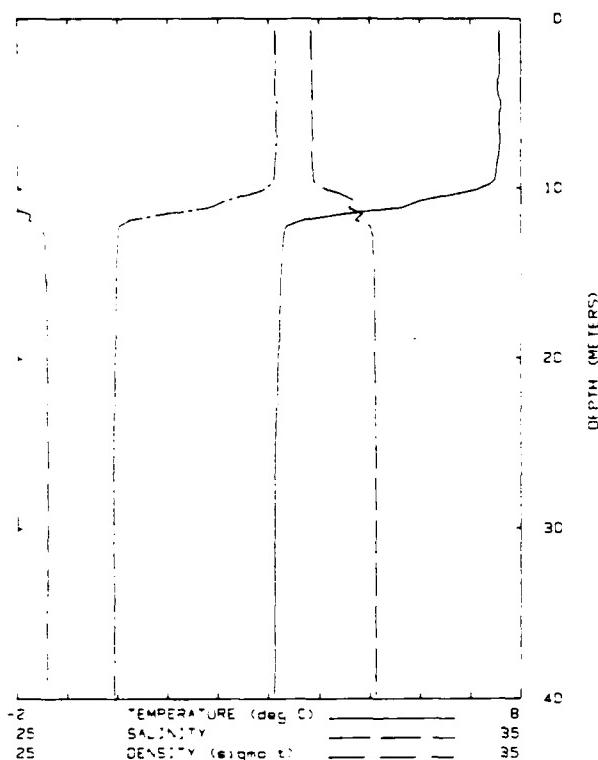
DEPTH (M) T (C) V (M/S) DENSITY S (‰/00)

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰/00)
5.1	7.59	1476.3	24.22	30.95
10.1	7.18	1475.4	24.48	31.22
15.0	5.73	1463.3	25.25	31.78
20.4	3.59	1462.1	25.40	31.93
25.1	3.55	1461.8	25.48	32.02
30.2	3.54	1461.6	25.51	32.04
35.4	3.52	1461.6	25.52	32.05
40.1	3.48	1461.5	25.53	32.06
45.1	3.24	1460.6	25.59	32.11
50.3	3.17	1460.4	25.61	32.13
51.1	3.17	1460.4	25.65	32.18

DEPTH (m)	TEMPERATURE (deg C)	PRESSURE (dBar)	CONDUCTIVITY (ms/cm)	DENSITY	SALINITY	SOUND VELOCITY (m/s)
6.3	8.3	3.70	32.120	30.806	24.130	1476.3
11.5	11.4	6.87	31.888	31.510	24.714	1473.9
17.4	17.3	9.72	30.837	32.050	25.493	1461.8
22.3	22.2	13.61	30.754	32.058	25.510	1462.5
27.0	27.7	13.54	30.710	32.066	25.522	1461.3
33.1	32.9	13.53	30.701	32.067	25.524	1461.3
38.2	38.0	13.46	29.857	32.076	25.537	1461.1
38.8	38.5	13.46	29.855	32.076	25.537	1461.1
41.5	41.3	13.32	29.540	32.078	25.552	1460.6
41.4	41.1	13.27	29.539	32.120	25.589	1461.4
42.4	42.2	13.26	29.533	32.127	25.595	1461.4
37.2	37.0	13.46	29.658	32.077	25.538	1461.1
32.2	32.0	13.52	29.700	32.070	25.526	1461.3
27.5	27.4	13.54	29.708	32.067	25.523	1461.3
22.7	22.5	13.59	20.742	32.063	25.515	1461.4
17.3	17.2	13.65	10.784	32.061	25.508	1461.6
12.2	12.1	8.22	3.581	31.871	24.822	1471.5
5.6	6.6	7.67	3.11	30.962	24.177	1476.2
2.7	2.7	7.60	32.17	30.847	24.175	1475.9

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
49 50	X	y	245	0626	Ship	70 55.8	160 10.8

49



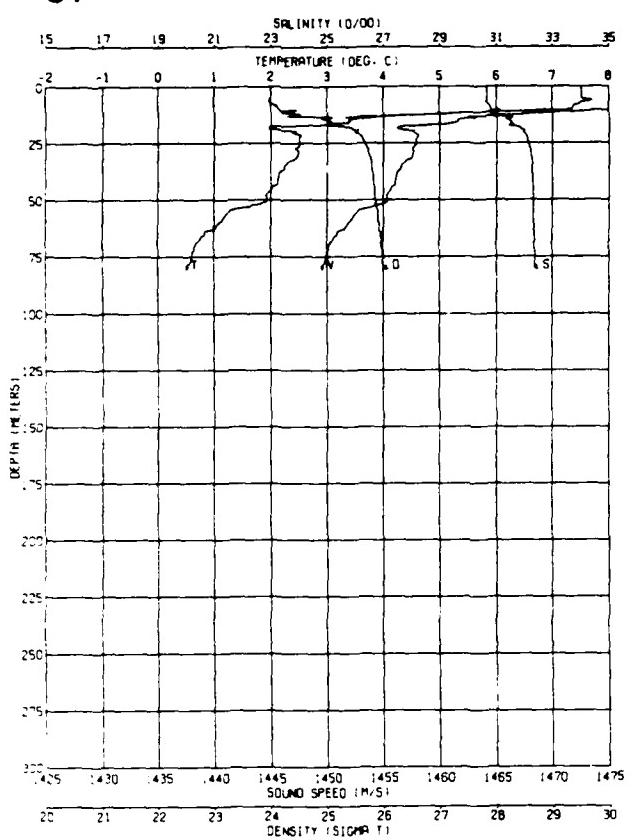
PRESSURE (dbar)	DEPTH (m.)	TEMPERATURE (deg C.)	CONDUCTIVITY (mS/cm.)	SALINITY	DENSITY	SOUND VELOCITY (K/sec.)
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2.7	2.7	7.57	31.983	30.850	24.103	1475.7
7.5	7.5	7.57	31.984	30.848	24.101	1475.7
12.7	12.6	3.31	29.488	32.036	25.519	1460.0
17.0	17.7	3.20	29.456	32.102	25.581	1459.7
22.8	22.7	3.16	29.426	32.102	25.584	1459.8
28.0	27.9	3.13	29.414	32.123	25.604	1459.6
33.5	33.3	3.12	29.413	32.124	25.606	1459.8
38.7	38.5	3.12	29.411	32.123	25.605	1459.7
42.1	41.9	3.12	29.413	32.123	25.605	1459.8
42.2	42.0	3.12	29.416	32.123	25.607	1459.8
40.7	40.5	3.12	29.418	32.127	25.608	1459.8
35.9	35.7	3.12	29.417	32.128	25.607	1459.7
31.4	31.2	3.14	29.421	32.118	25.599	1459.7
26.2	26.0	3.14	29.420	32.114	25.596	1459.8
21.1	21.0	3.10	29.444	32.102	25.584	1459.7
16.1	16.1	3.21	29.456	32.100	25.579	1459.7
11.5	11.5	3.60	30.180	32.380	25.731	1462.5
7.0	7.0	7.56	31.867	30.861	24.113	1475.7
2.3	2.3	7.58	31.865	30.849	24.101	1475.7

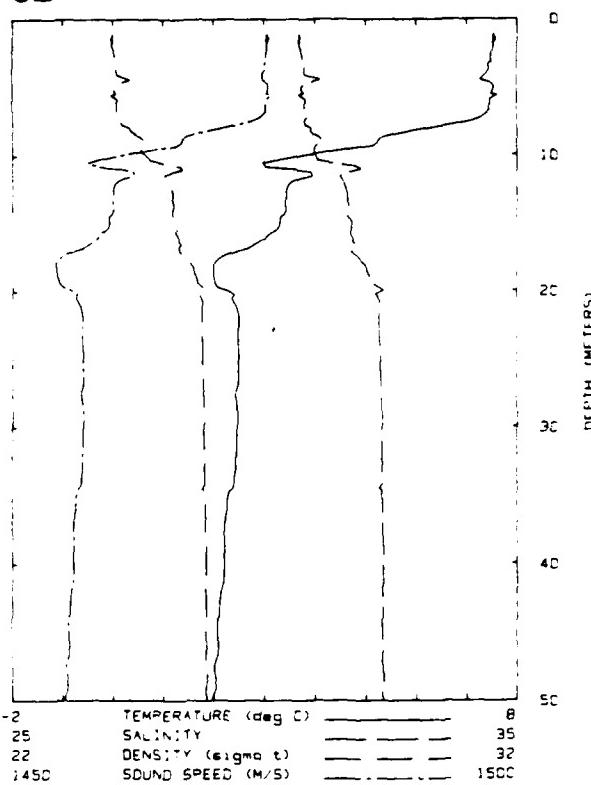
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	7.56	1476.1	24.12	30.82
10.4	4.13	1465.3	25.40	32.02
15.3	3.26	1460.7	25.48	32.00
20.3	3.20	1460.2	25.55	32.06
25.2	3.17	1460.0	25.57	32.08
30.3	3.13	1459.9	25.60	32.11
35.0	3.13	1459.9	25.61	32.12
40.1	3.13	1459.9	25.60	32.11
45.1	3.12	1460.0	25	32.10
50.0	3.12	1460.1	25	32.10
55.2	3.12	1460.1	25	32.10
55.7	3.12	1460.1	25.59	32.09

Station ASL APL Julian GMT Platform Latitude Longitude  
 Number Cast Cast Day hhmm Ship 71 2.2 159 39.1  
 51 X X 245 0819

51



52



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

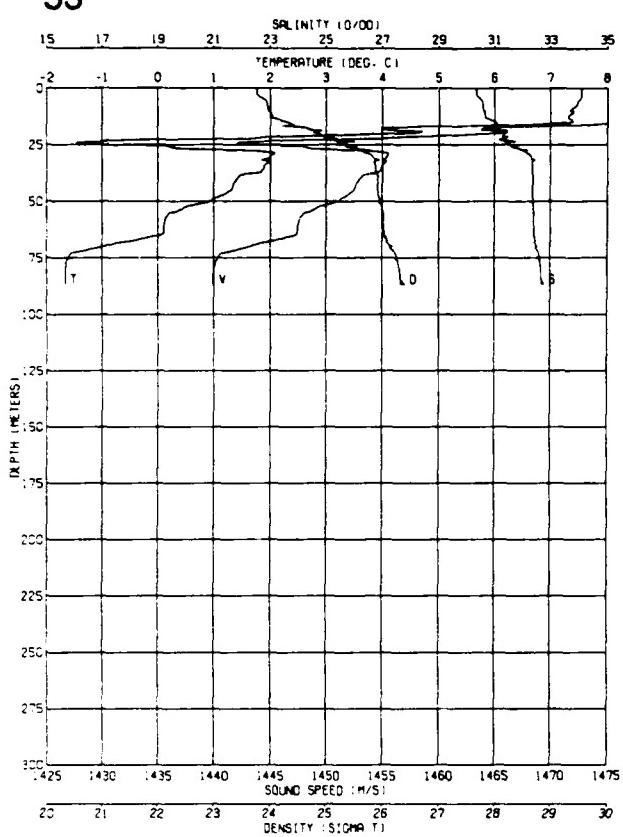
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	7.52	1475.6	24.01	30.65
10.5	7.12	1474.9	24.22	30.70
15.0	3.42	1462.4	25.06	31.50
20.1	2.40	1457.3	25.63	32.09
25.2	2.51	1457.6	25.77	32.27
30.2	2.47	1457.4	25.81	32.32
35.1	2.24	1456.5	25.85	32.34
40.3	2.13	1456.0	25.85	32.34
45.1	2.01	1455.6	25.88	32.35
50.3	1.94	1455.3	25.88	32.35
55.3	1.24	1452.6	25.93	32.36
60.2	1.06	1451.8	25.95	32.37
65.4	.82	1450.8	25.99	32.40
70.3	.66	1450.1	26.00	32.41
75.1	.61	1449.8	26.00	32.40
80.1	.51	1449.5	26.02	32.42
80.3	.51	1449.5	26.02	32.42

PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dbar) (M) (deg C) (msec/cm) (‰) (kg/m³) (m/sec)

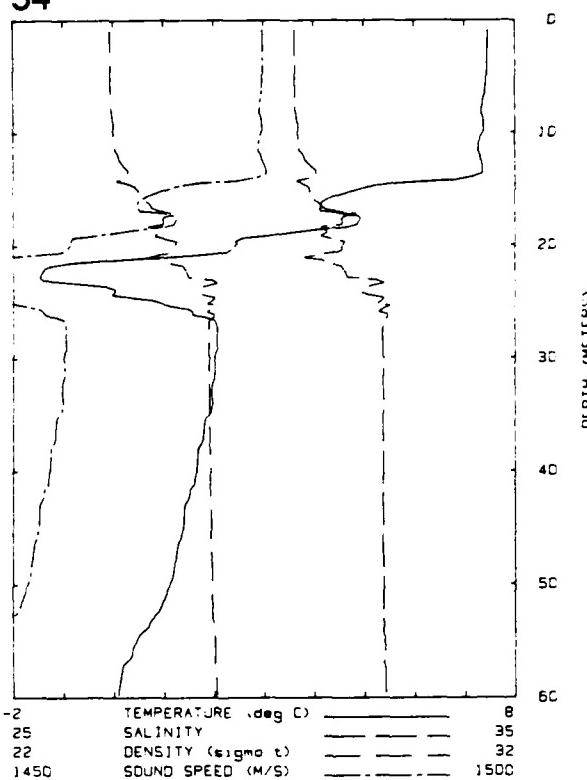
1.6	1.8	7.52	31.787	30.706	23.897	1475.3
1.4	1.4	7.52	31.781	30.702	23.894	1475.3
3.5	3.5	7.42	31.784	30.803	24.087	1475.0
8.5	8.5	5.55	30.405	30.864	24.444	1467.9
13.5	13.4	3.42	29.252	31.844	25.198	1460.0
18.5	18.4	2.00	28.408	32.024	25.614	1454.4
23.6	23.5	2.48	28.010	32.276	25.778	1456.9
28.8	28.6	2.47	28.036	32.318	25.814	1457.0
34.0	33.8	2.41	28.893	32.330	25.828	1456.8
38.8	38.7	2.21	28.848	32.348	25.857	1456.1
44.1	43.8	2.10	28.750	32.339	25.859	1455.7
49.2	48.9	2.05	28.724	32.349	25.870	1455.6
52.7	52.4	1.98	28.677	32.365	25.888	1455.3
52.7	52.4	1.98	28.677	32.365	25.888	1455.3
50.0	49.7	1.98	28.687	32.356	25.821	1455.2
44.9	44.7	2.09	28.750	32.347	25.865	1455.6
39.8	39.5	2.19	28.840	32.353	25.863	1456.0
34.8	34.6	2.30	28.844	32.382	25.878	1456.4
29.9	29.6	2.47	28.039	32.326	25.820	1457.0
24.9	24.6	2.49	28.026	32.267	25.787	1457.0
19.6	18.5	2.20	28.403	31.813	25.510	1455.2
14.0	14.0	3.32	29.288	31.782	25.316	1459.0
9.8	9.7	5.40	30.560	31.278	24.708	1467.7
4.5	4.4	7.42	31.784	30.792	24.078	1475.0

Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude  
 53 X X 245 0922 Ship 71 7.0 159 19.4  
 54

**53**



**54**



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

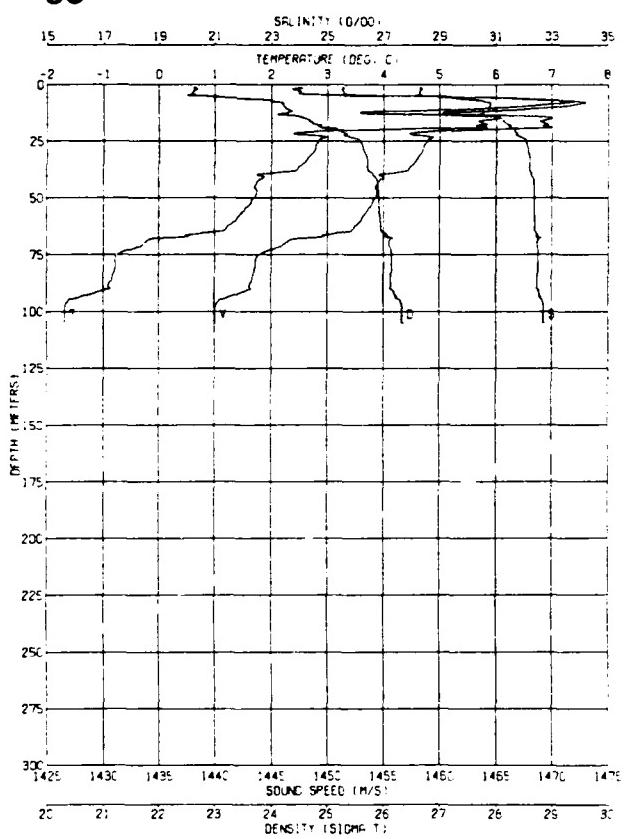
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	7.50	1475.4	33.91	30.54
10.1	7.39	1475.1	33.97	30.60
15.1	7.24	1475.5	34.36	31.08
20.1	3.69	1463.1	25.04	31.52
25.1	-.32	1444.1	25.42	31.63
30.2	2.00	1455.1	25.92	32.40
35.1	1.89	1454.8	25.93	32.40
40.2	1.38	1452.8	25.95	32.39
45.0	1.29	1452.4	25.95	32.39
50.2	.89	1450.9	25.99	32.40
55.3	.19	1447.9	26.06	32.44
60.1	.10	1447.4	26.05	32.42
65.1	-.08	1446.8	26.07	32.45
70.3	-1.05	1442.7	26.20	32.56
75.6	-1.63	1440.1	26.29	32.65
80.2	-1.67	1439.9	26.35	32.72
85.1	-1.67	1439.8	26.34	32.72
86.7	-1.67	1439.9	26.40	32.78

PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dBar) (M) (deg C) (mS/cm) (‰) (kg/m³) (M/sec)

4.8	4.8	7.43	31.629	30.618	23.940	1474.9
10.5	10.5	7.30	31.806	30.701	24.022	1474.6
16.3	16.3	4.14	29.380	31.089	24.698	1462.4
21.5	21.3	-0.05	26.114	31.179	25.052	1444.1
26.8	26.6	3.00	26.711	32.398	25.811	1455.0
32.1	31.9	2.00	26.682	32.384	25.886	1455.0
37.3	37.1	1.78	26.518	32.380	25.914	1454.2
42.5	42.2	1.50	27.287	32.368	25.923	1453.0
47.7	47.4	1.24	28.086	32.379	25.949	1452.0
52.9	52.5	0.89	27.800	32.382	25.973	1450.5
58.0	57.7	0.18	27.250	32.424	26.044	1447.3
63.1	62.7	-0.04	27.081	32.434	26.062	1446.4
68.9	66.5	-0.19	26.984	32.446	26.077	1445.8
66.9	66.5	-0.22	26.964	32.448	26.080	1445.7
67.0	66.6	-0.22	26.963	32.453	26.084	1445.7
63.2	62.8	-0.05	27.090	32.436	26.063	1446.4
58.4	58.1	0.18	27.251	32.432	26.050	1447.3
53.7	53.4	0.71	27.687	32.419	26.012	1449.7
49.0	48.7	1.18	26.057	32.389	25.968	1451.8
44.2	44.0	1.43	26.246	32.396	25.950	1452.8
39.6	39.3	1.71	26.470	32.387	25.924	1453.9
34.8	34.6	1.94	26.652	32.383	25.906	1454.9
29.6	29.8	2.06	26.748	32.383	25.897	1455.3
25.0	24.9	-0.03	26.738	31.974	25.891	1445.3
18.7	19.6	2.36	26.883	32.250	25.768	1456.3
14.7	14.6	4.82	31.850	33.086	26.202	1467.7
9.2	9.2	7.35	31.580	30.833	23.963	1474.6
4.0	4.0	7.40	31.823	30.834	23.957	1474.8

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
55	X	X	245	1033	Ship	71 11.8	158 52.6
56							

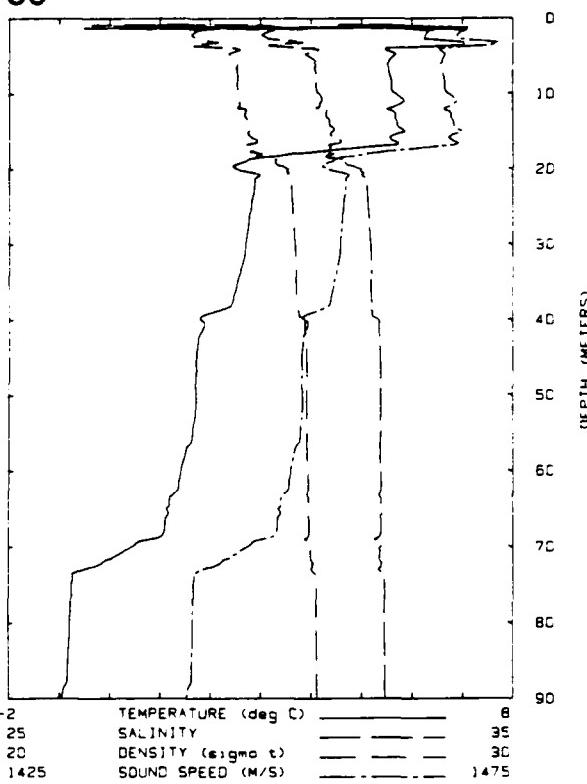
55



DEPTH (M) T (C) V (M/S) DENSITY S (‰)

5.1	5.03	1459.9	23.06	29.02
10.4	5.86	1459.3	24.24	30.73
15.1	5.99	1459.9	24.63	31.22
20.4	3.08	1461.0	25.21	31.66
25.4	2.83	1458.9	25.59	32.08
30.3	2.74	1458.4	25.66	32.16
35.0	2.55	1457.7	25.70	32.19
40.1	1.80	1454.7	25.83	32.28
45.1	1.71	1454.3	25.90	32.36
50.2	1.69	1454.3	25.92	32.38
55.1	1.53	1453.6	25.93	32.37
60.1	1.38	1453.0	25.94	32.38
65.2	.95	1451.5	26.01	32.44
70.0	-.27	1446.2	26.11	32.48
75.0	-.75	1444.0	26.16	32.52
80.2	-.80	1443.6	26.13	32.49
85.3	-.84	1443.4	26.13	32.48
90.1	-.86	1443.3	26.13	32.48
95.1	-1.61	1440.5	26.32	32.69
100.1	-1.67	1440.1	26.34	32.72
105.1	-1.67	1440.1	26.37	32.74

56

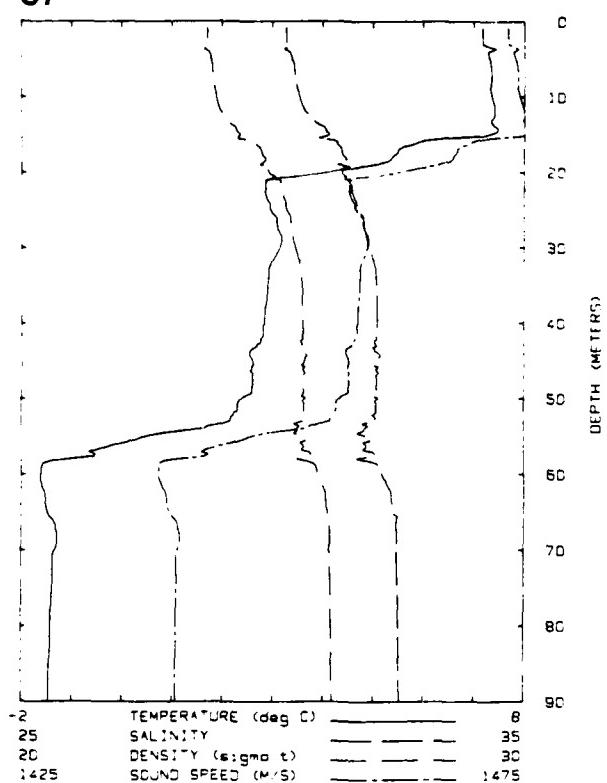


PRESSURE (dbar) DEPTH (M) TEMPERATURE (deg C) CONDUCTIVITY (mS/cm) SALINITY DENSITY SOUND VELOCITY (m/sec)

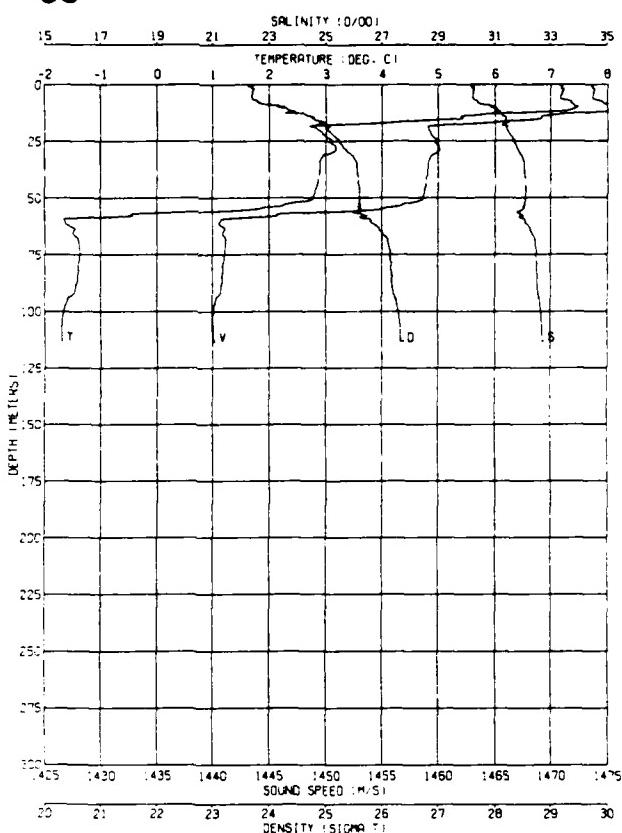
1.7	1.7	6.33	30.345	30.195	23.747	1470.0
8.2	8.1	5.58	30.580	31.103	24.548	1460.2
14.1	14.0	5.71	30.887	31.388	24.745	1469.1
19.6	19.5	5.49	28.558	31.718	23.332	1456.2
24.3	24.2	5.83	28.176	32.130	25.834	1450.3
29.9	29.7	5.71	28.117	32.180	25.685	1457.8
35.7	35.5	5.53	28.889	32.198	25.44	1457.2
41.5	41.3	5.85	28.584	32.380	25.883	1454.6
47.2	46.9	5.72	28.475	32.376	25.915	1454.1
52.5	52.2	5.70	28.468	32.381	25.920	1454.1
58.1	57.8	5.51	28.302	32.371	25.825	1453.3
63.9	63.5	5.21	28.086	32.393	25.854	1452.1
69.7	68.3	5.62	27.576	32.368	25.975	1449.5
75.2	74.0	-0.76	26.544	32.458	26.100	1443.4
81.3	80.6	-0.78	26.522	32.465	26.116	1443.3
87.5	86.9	-0.84	26.488	32.469	26.121	1443.2
92.7	92.1	-1.03	26.376	32.513	26.162	1442.4
92.6	92.0	-1.00	26.383	32.508	26.157	1442.5
92.7	92.1	-0.89	26.404	32.513	26.161	1442.6
98.9	98.3	-0.85	26.484	32.472	26.124	1443.1
102.7	92.2	-0.79	26.520	32.470	26.120	1443.3
76.4	75.9	-0.76	26.544	32.482	26.112	1443.4
70.5	70.1	0.80	27.619	32.434	26.030	1449.5
64.9	64.5	1.26	28.122	32.401	25.885	1452.3
59.6	59.3	1.50	28.308	32.388	25.841	1453.3
53.7	53.4	1.71	28.475	32.387	25.925	1454.2
47.6	47.3	1.71	28.486	32.377	25.816	1454.1
41.5	41.3	2.02	28.859	32.310	25.841	1455.2
35.6	35.4	2.63	28.073	32.203	25.709	1457.7
30.1	29.9	2.77	29.148	32.157	25.661	1458.1
24.0	23.8	3.03	29.185	31.943	25.469	1458.9
18.2	18.1	5.55	30.852	31.462	24.837	1468.7
11.6	11.6	5.23	30.041	30.853	24.393	1466.5
5.9	5.8	6.86	31.013	30.456	23.888	1472.5

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 57 X 245 1135 Ship 71 16.9 158 28.2  
 58 X

57



58

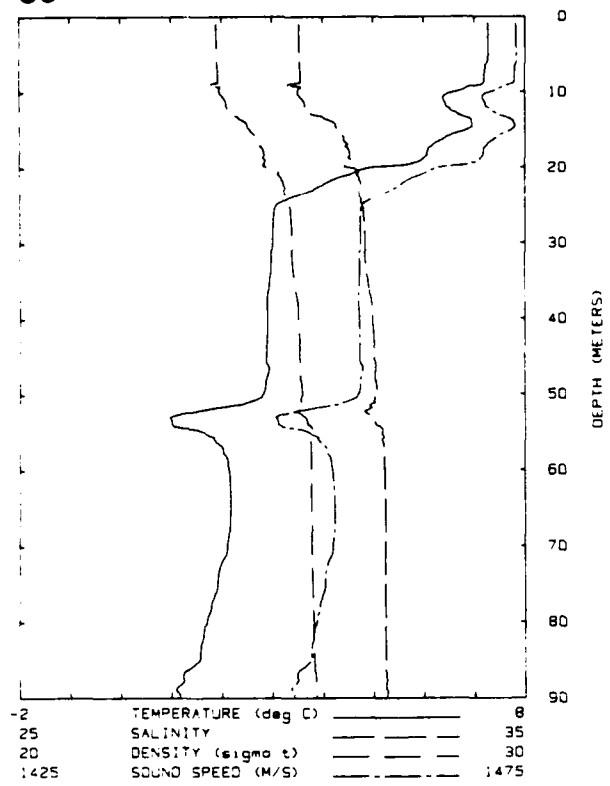


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
5.1	5.1	7.31	31.307	30.373	23.764	1474.1
10.7	10.8	7.39	31.541	30.559	23.800	1474.7
15.0	15.8	8.00	31.017	31.238	24.808	1470.2
21.6	21.5	2.84	28.700	31.544	25.167	1457.5
27.5	27.3	3.10	28.139	31.818	25.364	1459.1
33.0	33.7	2.92	28.195	32.082	25.573	1458.7
40.1	38.9	2.84	28.154	32.090	25.802	1458.5
45.7	45.4	2.61	28.053	32.066	25.801	1457.6
51.0	51.6	2.31	28.897	32.057	25.818	1456.3
56.0	57.7	-0.56	28.266	31.892	25.646	1443.2
64.6	64.2	-1.50	25.903	32.397	26.081	1439.6
71.2	70.8	-1.37	26.067	32.479	26.145	1440.4
78.1	77.6	-1.41	26.081	32.505	26.186	1440.4
84.6	84.3	-1.44	26.050	32.521	26.180	1440.4
91.5	91.0	-1.46	26.056	32.548	26.202	1440.4
97.0	97.1	-1.44	26.005	32.670	26.305	1439.8
97.9	97.2	-1.64	26.007	32.676	26.310	1439.8
98.5	96.9	-1.83	26.010	32.671	26.306	1439.8
99.1	90.5	-1.46	26.061	32.559	26.211	1440.4
99.6	84.0	-1.42	26.081	32.539	26.194	1440.5
101.1	77.7	-1.41	26.073	32.525	26.193	1440.4
101.2	70.8	-1.39	26.068	32.500	26.162	1440.4
104.6	64.3	-1.51	26.064	32.377	26.065	1439.5
107.9	57.5	-0.19	26.711	32.080	25.791	1445.2
111.4	51.1	2.49	26.086	32.118	25.852	1457.2
115.2	44.9	2.76	26.115	32.085	25.811	1458.3
119.4	39.2	2.97	26.183	32.089	25.598	1458.6
122.9	32.8	3.01	26.216	31.999	25.515	1459.0
126.1	25.9	3.11	26.075	31.735	25.297	1459.0
129.5	20.4	2.78	26.598	31.485	25.126	1457.1
134.3	14.3	0.02	31.112	31.322	24.872	1470.3
136.4	8.4	7.34	31.399	30.448	23.619	1474.4
139.2	2.6	7.20	31.138	30.294	23.717	1473.5

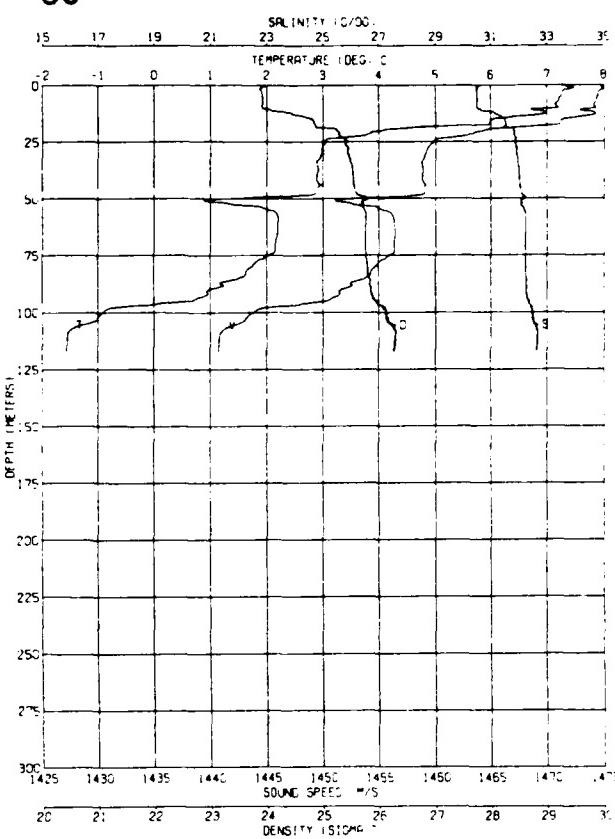
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	7.16	1473.7	23.70	30.22
10.1	7.48	1475.8	24.25	30.96
15.0	5.44	1469.2	24.77	31.36
20.1	2.87	1459.2	25.03	31.41
25.1	3.07	1459.6	25.25	31.69
30.2	3.10	1459.9	25.42	31.89
35.0	2.89	1459.2	25.57	32.06
40.1	2.88	1459.0	25.57	32.06
45.0	2.83	1458.9	25.59	32.08
50.2	2.79	1458.8	25.62	32.11
55.1	1.72	1454.6	25.58	31.97
60.5	-1.63	1440.6	25.79	32.05
65.2	-1.49	1440.9	26.00	32.31
70.4	-1.38	1441.1	26.11	32.44
75.1	-1.38	1441.0	26.14	32.48
80.2	-1.40	1440.9	26.16	32.50
85.4	-1.41	1440.8	26.18	32.52
90.2	-1.46	1440.7	26.19	32.53
95.2	-1.60	1440.3	26.27	32.62
100.1	-1.66	1440.1	26.30	32.66
110.1	-1.70	1440.1	26.33	32.70
113.6	-1.70	1440.1	26.35	32.72

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 59 X 245 1300 Ship 71 21.4 157 55.2  
 60 X

59



60



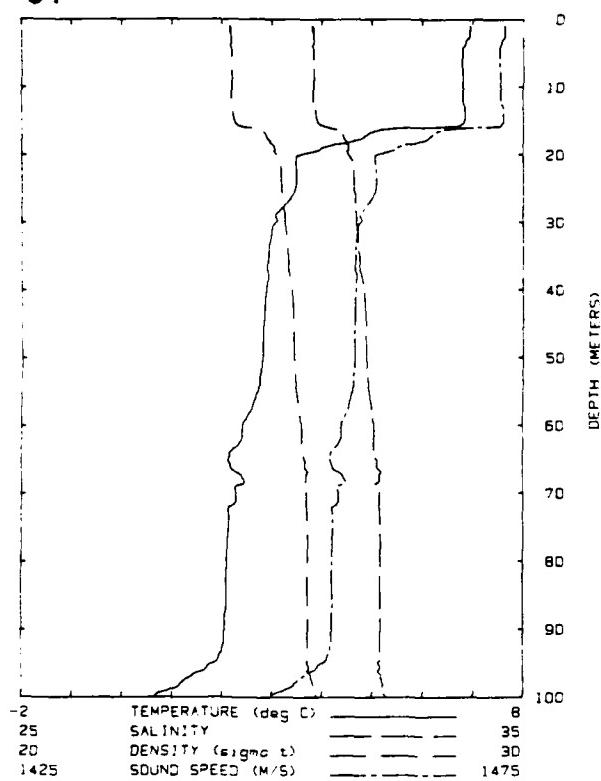
PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dBar) (M) (deg C) (mS/cm) (‰) (M/sec)

8.7	9.8	8.81	31.034	30.526	23.950	1472.4
15.3	15.2	8.77	31.727	31.310	24.568	1473.3
20.5	20.4	4.73	30.373	31.694	25.110	1465.7
25.6	25.5	3.04	29.082	31.808	25.361	1458.8
30.8	30.7	2.98	29.089	31.844	25.394	1458.7
35.9	35.7	2.83	28.068	31.917	25.458	1458.6
41.1	40.8	2.80	28.124	31.884	25.521	1458.6
46.2	46.0	2.88	29.175	32.057	25.572	1458.6
51.4	51.1	2.48	28.828	32.042	25.593	1457.1
56.5	56.1	1.87	28.488	32.208	25.770	1454.7
61.6	61.2	2.15	28.721	32.234	25.771	1458.0
66.8	66.2	2.15	28.730	32.243	25.778	1456.1
71.8	71.2	2.08	28.685	32.237	25.770	1455.8
76.5	76.1	1.87	28.502	32.240	25.798	1455.1
81.8	81.1	1.84	28.322	32.248	25.818	1454.1
86.4	85.8	1.42	28.151	32.257	25.840	1453.2
91.3	90.7	0.87	27.700	32.254	25.871	1450.8
96.1	95.5	0.28	27.251	32.271	25.915	1448.3
96.2	95.6	0.11	27.141	32.315	25.958	1447.5
96.0	95.4	0.28	27.282	32.323	25.957	1448.4
95.9	95.2	0.27	27.284	32.309	25.948	1448.2
92.6	92.0	0.86	27.738	32.287	25.808	1450.8
87.4	86.8	1.23	28.005	32.268	25.850	1452.4
92.4	91.8	1.85	28.335	32.257	25.825	1454.2
77.4	76.0	1.91	28.540	32.252	25.803	1455.2
72.5	72.1	2.09	28.688	32.253	25.790	1458.0
67.7	67.3	2.18	28.739	32.247	25.760	1456.2
82.9	82.5	2.19	28.754	32.243	25.776	1458.2
58.1	57.7	2.14	28.690	32.216	25.758	1455.8
53.1	52.8	0.78	27.391	31.992	25.887	1449.4
46.2	47.8	2.67	28.150	32.051	25.508	1458.7
43.0	42.8	2.88	28.123	32.008	25.533	1458.6
37.9	37.7	2.80	28.108	31.872	25.503	1458.6
32.5	32.3	2.95	29.067	31.878	25.422	1458.6
27.1	27.0	3.02	29.087	31.838	25.387	1458.7
21.7	21.6	3.81	29.829	31.851	25.317	1462.5
16.2	16.1	8.01	31.305	31.543	24.847	1470.8
9.9	9.8	7.31	31.401	30.570	23.818	1474.4
4.6	4.5	7.28	31.427	30.550	23.930	1474.1

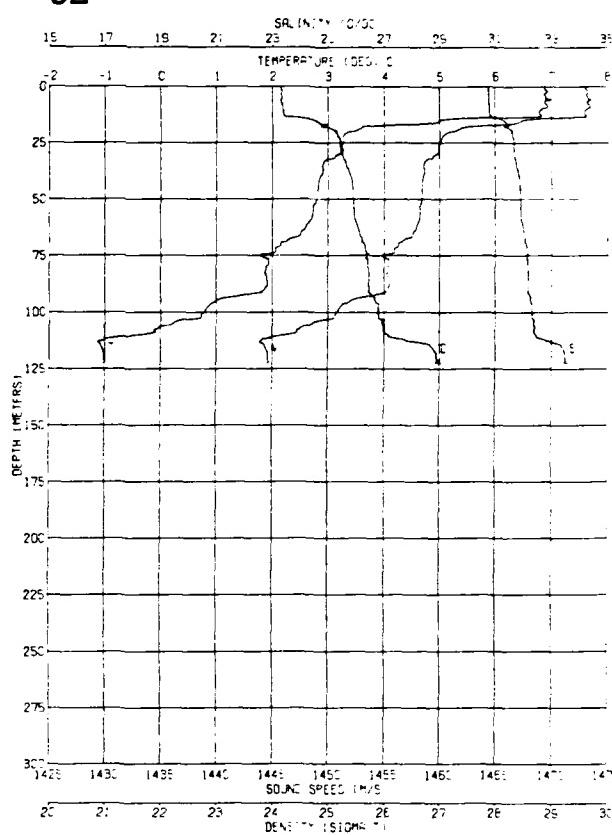
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.1	7.25	1474.4	23.92	30.51
10.4	7.19	1474.3	23.94	30.53
15.4	6.03	1471.5	24.81	31.49
20.3	4.04	1464.5	25.23	31.79
25.2	3.04	1460.1	25.34	31.80
30.1	2.98	1459.4	25.38	31.84
35.1	2.90	1459.0	25.47	31.94
40.1	2.90	1458.9	25.52	31.99
45.0	2.91	1459.0	25.55	32.02
50.0	1.11	1452.5	25.69	32.07
55.1	2.04	1455.5	25.73	32.17
60.1	2.20	1456.3	25.76	32.22
65.1	2.20	1456.4	25.76	32.22
70.0	2.15	1456.3	25.76	32.21
75.1	2.03	1455.9	25.77	32.22
80.3	1.72	1454.7	25.79	32.22
85.0	1.50	1453.9	25.81	32.23
90.2	.96	1451.7	25.86	32.24
95.1	.62	1450.3	25.89	32.27
100.1	-.92	1443.9	26.06	32.40
110.1	-1.55	1440.9	26.25	32.60
117.2	-1.56	1440.7	26.25	32.60

Station ASL APL Julian GMT Platform Latitude Longitude  
 Number Cast Cast Day hmmm Ship 71 24.9 157 31.9  
 61 X X 245 1409  
 62

61



62



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dBar) (m) (deg C) (ms/cm) (‰) (kg/m³) (m/sec)

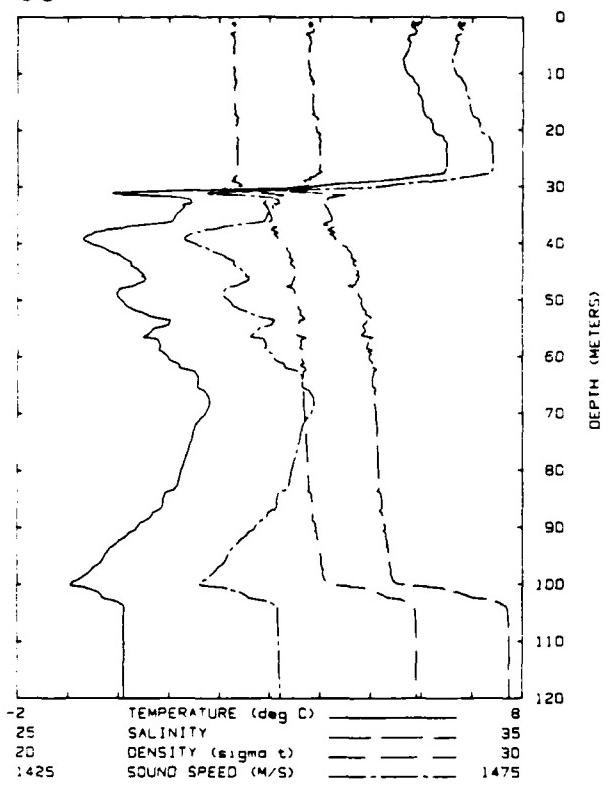
1.5	1.5	6.94	31.427	30.832	24.172	1473.2
2.1	2.1	6.94	31.422	30.831	24.172	1473.2
7.4	7.4	6.79	31.303	30.833	24.192	1472.7
12.7	12.6	6.82	31.344	30.851	24.203	1472.9
17.9	17.8	6.76	30.177	31.445	24.911	1465.4
23.1	22.9	3.49	28.304	31.837	25.186	1460.4
28.3	28.1	3.16	28.083	31.866	25.253	1459.2
33.3	33.1	2.94	28.831	31.717	25.296	1458.4
38.5	38.2	2.92	28.885	31.800	25.365	1458.5
44.6	44.3	2.83	28.886	31.886	25.424	1458.2
50.8	50.5	2.79	28.952	31.887	25.444	1458.2
57.1	56.8	2.63	28.896	31.978	25.530	1457.7
63.3	62.9	2.32	28.897	32.035	25.598	1456.6
68.5	68.4	2.46	28.891	32.134	25.668	1457.4
75.0	74.5	2.14	28.660	32.169	25.720	1456.1
81.3	80.8	2.09	28.630	32.173	25.726	1456.0
87.4	86.9	2.09	28.621	32.166	25.721	1456.1
93.6	93.2	2.00	28.558	32.173	25.733	1455.8
99.3	98.6	1.07	27.811	32.180	25.800	1451.8
101.1	100.5	0.68	27.562	32.249	25.809	1450.2
101.3	100.7	0.71	27.604	32.284	25.803	1450.3
101.4	100.7	0.75	27.630	32.282	25.800	1450.5
101.4	100.8	0.74	27.624	32.278	25.898	1450.4
96.9	96.3	1.28	26.013	32.244	25.840	1452.7
90.7	90.1	2.03	28.581	32.176	25.734	1455.9
84.2	83.7	2.09	28.627	32.174	25.727	1456.0
78.4	77.9	2.11	28.642	32.172	25.724	1456.0
72.4	72.0	2.26	28.722	32.135	25.844	1456.6
67.5	67.1	2.13	28.576	32.078	25.648	1455.8
61.7	61.3	2.56	28.073	32.009	25.560	1457.5
55.9	55.4	2.74	28.941	31.924	25.479	1458.1
50.0	49.7	2.79	28.957	31.890	25.446	1458.2
43.9	43.6	2.83	28.988	31.865	25.423	1458.2
38.7	38.4	2.91	28.874	31.795	25.381	1458.4
32.9	32.7	3.05	29.015	31.713	25.284	1458.8
27.2	27.1	3.38	29.223	31.858	25.214	1460.0
21.4	21.3	3.35	28.199	31.844	25.204	1459.8
16.1	16.1	6.94	30.280	31.400	24.855	1466.1
10.8	10.7	6.80	31.302	30.823	24.164	1472.7
5.7	5.7	6.95	31.395	30.784	24.134	1473.2

DEPTH (M) T (C) V (M/S) DENSITY S (‰)

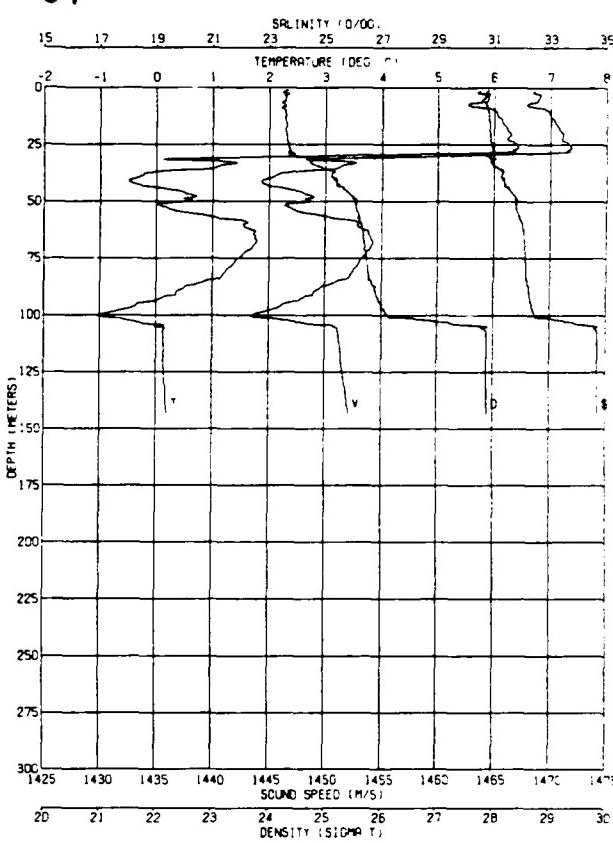
5.1	6.90	1473.3	24.17	30.78
10.3	6.81	1473.1	24.18	30.78
15.0	4.95	1467.3	24.79	31.33
20.3	3.40	1461.3	25.07	31.51
25.1	3.27	1460.3	25.16	31.59
30.1	3.24	1460.0	25.17	31.60
35.0	2.91	1458.7	25.29	31.71
40.1	2.87	1458.6	25.38	31.81
45.1	2.82	1458.5	25.41	31.85
50.2	2.80	1458.4	25.42	31.86
55.3	2.75	1458.3	25.45	31.89
60.2	2.67	1458.1	25.49	31.93
65.1	2.52	1457.7	25.55	32.00
70.2	2.15	1456.3	25.64	32.07
75.3	1.78	1454.9	25.68	32.09
80.1	1.90	1455.3	25.69	32.11
85.1	1.91	1455.4	25.72	32.15
90.2	1.85	1455.3	25.72	32.14
95.3	.99	1452.0	25.83	32.22
100.1	.77	1450.8	25.86	32.25
110.1	-.37	1446.4	26.03	32.38
120.1	-1.02	1444.7	26.92	33.45
122.4	-1.02	1444.8	27.03	33.59

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 63 X 245 1530 Ship 71 28.7 157 5.3  
 64 X

63



64



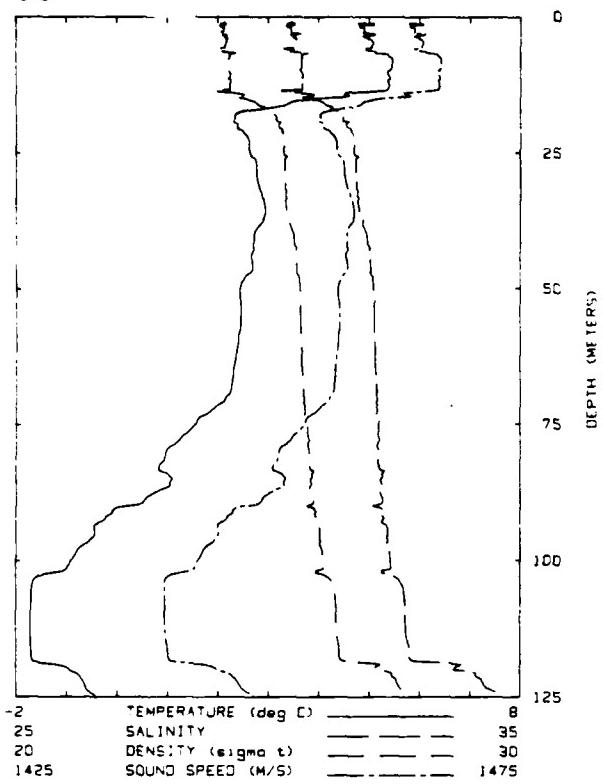
PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dBar) (m) (deg C) (ms/cm) (‰) (kg/m³) (m/sec)

6.0	5.9	5.74	30.411	24.293	1468.4	
11.2	11.2	5.85	30.521	24.282	1469.0	
18.3	18.2	6.02	30.700	24.308	1469.8	
21.3	21.2	6.12	31.138	24.353	1471.6	
25.6	26.2	6.30	31.218	24.358	1472.0	
32.0	31.6	6.85	26.898	31.300	25.101	1449.0
37.7	37.5	0.00	26.194	31.218	25.082	1444.8
43.5	43.3	0.25	26.715	31.845	25.413	1446.4
49.0	48.7	-0.02	26.577	31.738	25.500	1445.4
54.2	53.8	1.00	27.518	31.800	25.579	1450.4
60.4	60.0	0.87	27.551	31.870	25.837	1450.4
66.6	66.2	1.72	28.238	32.072	25.672	1454.0
72.8	72.4	1.50	28.110	32.130	25.733	1453.2
78.9	78.6	1.30	27.883	32.150	25.782	1452.4
84.2	83.7	1.00	27.710	32.130	25.763	1452.2
90.2	89.7	0.40	27.342	32.280	25.918	1449.7
95.5	94.8	-0.27	26.879	32.371	26.020	1445.8
102.0	101.4	-0.41	27.789	33.734	27.125	1447.1
107.3	106.8	0.10	28.887	34.728	27.800	1450.8
113.4	111.8	0.10	28.975	34.735	27.807	1451.0
117.5	116.7	0.11	28.988	34.740	27.812	1451.1
122.4	121.6	0.11	28.988	34.744	27.814	1451.2
123.6	122.8	0.12	28.001	34.744	27.914	1451.2
123.6	122.8	0.11	28.895	34.742	27.912	1451.2
123.6	122.8	0.12	28.007	34.747	27.916	1451.2
123.7	122.8	0.13	28.014	34.750	27.919	1451.3
120.8	120.0	0.11	28.000	34.747	27.917	1451.2
115.8	115.0	0.10	28.882	34.742	27.913	1451.0
110.8	110.1	0.10	28.878	34.740	27.912	1450.9
105.9	105.2	0.11	28.880	34.728	27.908	1450.8
100.3	99.7	-0.87	28.498	32.497	26.144	1443.3
94.8	94.2	0.03	27.119	32.371	28.007	1447.2
89.8	89.2	0.83	27.518	32.287	25.894	1449.7
83.8	83.3	1.14	27.681	32.182	25.787	1451.8
77.8	77.3	1.33	27.888	32.162	25.768	1452.6
71.0	71.5	1.59	28.213	32.170	25.759	1453.6
66.7	66.3	1.76	28.282	32.077	25.671	1454.3
60.8	60.3	1.42	27.884	31.938	25.583	1452.4
54.4	54.0	0.70	27.200	31.808	25.521	1448.9
49.1	48.8	0.03	28.898	31.851	25.589	1445.8
43.8	43.5	0.43	28.858	31.845	25.405	1447.3
38.5	38.3	-0.50	25.917	31.373	25.225	1442.5
33.3	33.1	1.13	27.184	31.324	25.119	1449.8
27.5	27.3	6.26	31.210	31.204	24.950	1471.4
21.2	21.1	6.24	30.898	30.884	24.301	1470.8
14.8	14.5	6.08	30.742	30.852	24.294	1470.0
9.1	9.0	6.03	30.681	30.833	24.285	1469.7
3.8	3.9	5.91	30.561	30.817	24.287	1469.1

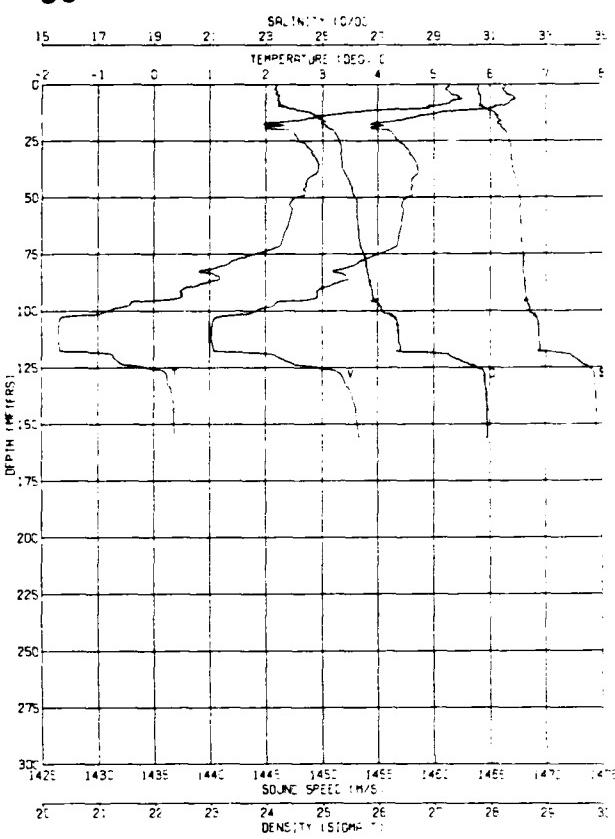
DEPTH (m)	T (C)	V (M/S)	DENSITY	S (‰)
5.5	5.78	1468.8	24.28	30.77
10.1	6.02	1469.7	24.28	30.79
15.1	6.14	1470.4	24.30	30.84
20.6	6.30	1471.1	24.31	30.87
25.4	6.41	1471.7	24.36	30.94
30.3	2.55	1458.7	24.63	30.91
35.3	1.06	1451.2	24.93	31.12
40.3	-0.43	1444.6	25.14	31.29
45.3	-0.40	1447.6	25.37	31.60
50.0	-0.47	1448.3	25.52	31.79
55.2	-0.60	1448.5	25.58	31.87
60.3	1.55	1452.8	25.64	32.01
65.3	1.77	1454.0	25.67	32.06
70.2	1.70	1454.0	25.70	32.09
75.3	1.44	1453.2	25.73	32.11
80.1	1.24	1452.4	25.75	32.13
85.1	-0.86	1451.1	25.81	32.18
91.3	-0.33	1449.0	25.91	32.27
95.3	-0.34	1446.3	26.01	32.36
100.2	-0.97	1443.6	26.12	32.47
110.1	0.12	1451.2	27.88	34.71
120.0	0.13	1451.5	27.88	34.71
130.0	0.15	1451.7	27.89	34.71
140.1	0.17	1452.0	27.89	34.72
143.9	0.18	1452.1	27.89	34.72

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 65 X 245 1659 Ship 71 32.5 156 36.9  
 66 X

65



66



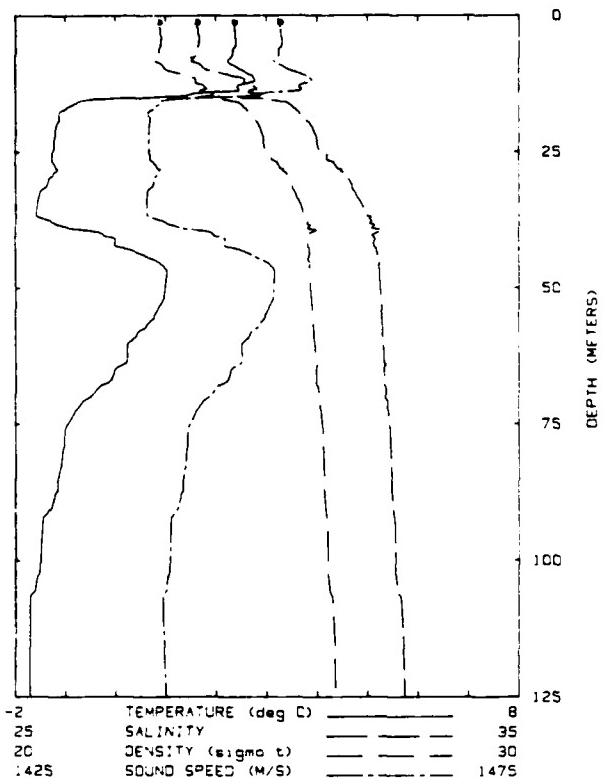
PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
 (dBar) (M) (deg C) (mS/cm) (PPT) (M/sec)

1.2	1.2	4.84	29.386	30.488	24.130	1484.2
2.1	2.1	4.88	29.388	30.434	24.098	1484.4
8.0	5.8	4.93	29.327	30.311	23.886	1464.5
11.0	10.9	5.40	30.027	30.882	24.239	1466.8
15.8	15.8	5.44	28.807	31.089	24.783	1459.4
20.8	20.8	5.45	28.488	31.850	25.283	1455.8
25.8	25.7	5.87	26.773	31.801	25.385	1457.2
30.8	30.7	5.80	28.841	31.755	25.339	1457.7
35.8	35.7	5.94	28.003	31.803	25.385	1458.0
40.8	40.8	5.71	28.843	31.857	25.506	1457.8
45.8	45.8	5.69	28.882	32.025	25.563	1457.8
50.8	50.5	2.42	28.819	32.080	25.635	1456.8
55.8	55.8	2.45	28.849	32.087	25.639	1457.1
60.8	60.6	2.38	28.809	32.114	25.658	1456.9
66.0	65.8	2.30	28.763	32.139	25.684	1456.6
71.1	70.7	2.12	28.837	32.158	25.712	1456.0
76.1	75.8	1.49	28.192	32.189	25.781	1453.3
81.2	80.7	0.95	27.716	32.194	25.818	1450.9
86.3	85.7	1.05	27.838	32.246	25.854	1451.5
91.4	90.8	-0.06	26.853	32.275	25.925	1446.5
96.4	95.8	-0.49	26.695	32.361	26.021	1444.8
102.5	101.8	-1.05	26.166	32.248	25.949	1442.1
108.9	108.2	-1.71	25.893	32.723	26.350	1439.7
115.3	114.5	-1.71	26.026	32.770	26.387	1439.9
121.7	120.8	-0.76	27.783	34.118	27.451	1448.3
127.2	126.3	-0.05	26.835	34.847	28.006	1450.6
132.4	131.4	0.25	26.188	34.805	27.856	1452.1
133.9	133.0	0.28	28.206	34.820	27.866	1452.2
134.0	133.0	0.28	28.210	34.823	27.868	1452.3
139.9	133.0	0.28	28.218	34.828	27.972	1452.3
133.0	133.0	0.28	28.218	34.828	27.972	1452.3
131.4	130.5	0.20	28.114	34.792	27.948	1451.8
127.1	126.3	0.02	28.886	34.705	27.688	1450.8
122.5	121.8	-0.69	27.878	34.161	27.482	1448.7
118.3	115.8	-1.70	26.045	32.767	26.401	1440.0
110.5	108.8	-1.71	26.000	32.736	26.380	1439.8
104.3	103.6	-1.68	25.883	32.883	26.301	1438.7
98.1	97.4	-0.58	26.672	32.427	26.078	1444.5
92.8	92.2	0.30	27.288	32.329	25.982	1448.3
87.8	87.3	0.72	27.388	32.281	25.801	1450.1
82.8	82.3	0.84	27.830	33.193	25.824	1450.5
77.7	77.2	1.31	28.080	32.280	25.854	1452.8
72.5	72.1	1.88	28.587	32.320	25.772	1455.4
67.4	67.0	2.20	28.764	32.147	25.891	1458.6
62.3	62.0	2.34	28.794	32.195	25.877	1458.8
57.2	58.9	2.42	28.843	32.112	25.853	1457.0
52.1	51.8	2.43	28.835	32.106	25.848	1458.9
47.1	46.8	2.50	28.858	33.086	25.827	1457.5
41.9	41.7	2.60	28.946	31.983	25.520	1457.7
36.7	36.7	2.90	28.024	31.872	25.423	1458.4
31.9	31.7	2.65	28.860	31.758	25.337	1458.0
26.7	26.6	2.70	28.730	31.726	25.323	1457.2
21.8	21.5	2.33	28.264	31.540	25.204	1453.3
16.5	16.5	2.79	28.492	31.345	25.012	1458.9
11.5	11.4	3.20	28.857	31.304	24.939	1458.0
6.5	6.4	5.39	30.056	30.721	24.271	1468.9
1.7	1.7	5.36	38.832	30.498	24.098	1468.4

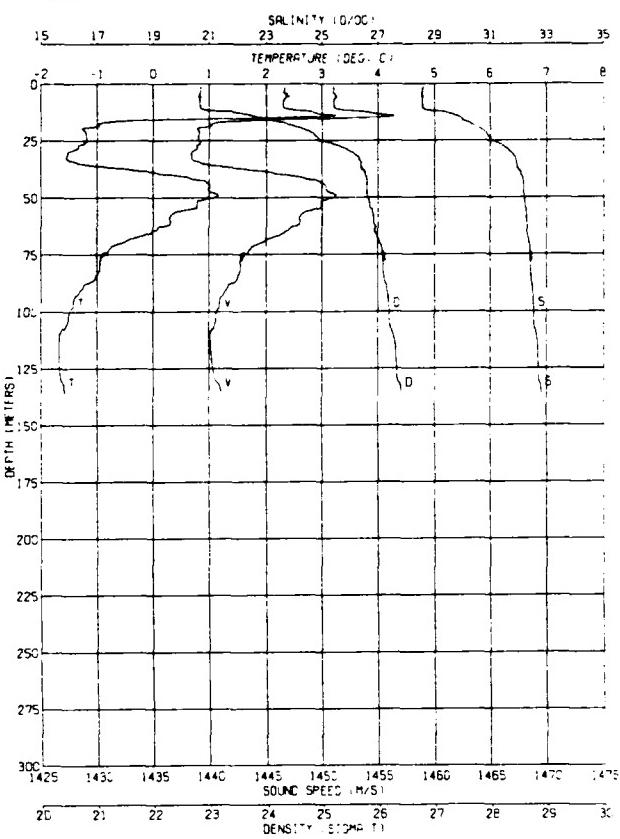
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (PPM)
5.2	5.45	1467.0	24.22	30.64
10.1	4.94	1465.5	24.37	30.76
15.1	2.75	1457.8	24.86	31.17
20.3	2.41	1456.1	25.13	31.46
25.1	2.59	1456.9	25.26	31.63
30.3	2.82	1457.9	25.32	31.73
35.1	2.93	1458.5	25.35	31.78
40.2	2.85	1458.4	25.42	31.86
45.3	2.71	1458.1	25.52	31.97
50.3	2.51	1457.5	25.61	32.06
55.4	2.46	1457.3	25.62	32.07
60.1	2.42	1457.2	25.63	32.08
65.1	2.34	1457.0	25.65	32.10
70.3	2.27	1456.8	25.67	32.12
75.3	1.78	1455.0	25.74	32.17
80.1	1.27	1453.0	25.77	32.16
85.0	1.18	1452.4	25.82	32.21
90.1	.56	1450.0	25.84	32.20
95.3	.26	1448.6	25.92	32.28
100.1	-.82	1444.4	26.06	32.40
110.2	-1.70	1440.3	26.36	32.74
120.3	-.73	1446.0	27.32	33.96
130.1	-.24	1451.8	27.95	34.79
140.1	.35	1452.8	27.96	34.82
150.2	.37	1453.2	27.96	34.81
156.3	.37	1453.3	27.95	34.81

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 67 X 245 1831 Ship 71 36.7 156 8.3  
 68 X

67



68

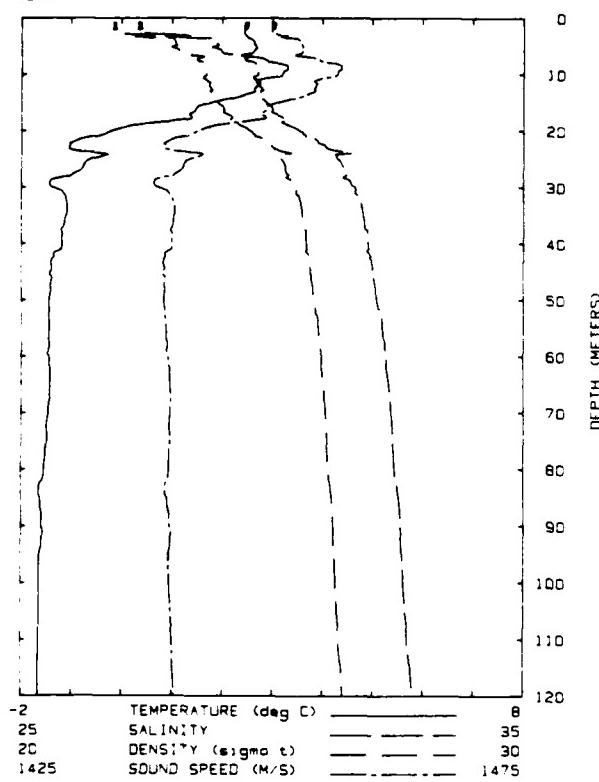


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.2	1.2	24.42	28.003	28.885	22.922	1451.6
1.0	1.0	23.38	25.981	28.885	22.928	1451.3
2.5	2.5	23.37	25.938	28.847	22.695	1451.4
6.7	6.7	23.33	25.874	28.600	22.860	1451.2
13.2	13.2	24.61	28.898	28.765	23.783	1453.2
19.7	19.8	-1.15	25.008	30.038	24.810	1438.4
25.3	25.2	-1.28	25.122	31.102	25.028	1438.3
30.8	30.4	-1.34	25.468	31.053	25.478	1438.0
36.0	35.8	-1.38	25.490	31.038	25.710	1438.1
41.0	40.8	-0.08	26.814	32.121	25.811	1445.5
45.8	45.8	0.90	27.700	32.247	25.883	1450.2
50.6	50.3	0.97	27.771	32.256	25.888	1450.7
55.3	55.0	0.77	27.634	32.288	25.904	1449.9
60.0	59.7	0.32	27.288	32.302	25.938	1447.9
64.7	64.4	0.08	27.138	32.354	25.991	1447.0
69.8	69.2	-0.42	26.742	32.372	26.027	1444.7
75.5	75.0	-0.95	26.380	32.444	26.104	1442.4
81.4	80.8	-1.06	26.314	32.474	26.132	1442.0
87.2	86.7	-1.15	26.285	32.495	26.151	1441.8
93.1	92.5	-1.44	26.077	32.554	26.207	1440.5
98.8	98.1	-1.46	26.058	32.568	26.217	1440.4
104.9	103.8	-1.57	26.010	32.595	26.243	1440.2
110.2	109.5	-1.70	25.885	32.700	26.331	1439.8
115.9	115.1	-1.70	26.006	32.730	26.356	1439.9
121.4	120.6	-1.70	26.017	32.745	26.367	1440.0
126.8	126.0	-1.70	26.026	32.750	26.372	1440.1
132.3	131.3	-1.68	26.086	32.788	26.402	1440.4
137.6	136.7	-1.63	26.142	32.828	26.434	1440.7
137.8	136.8	-1.64	26.138	32.828	26.433	1440.7

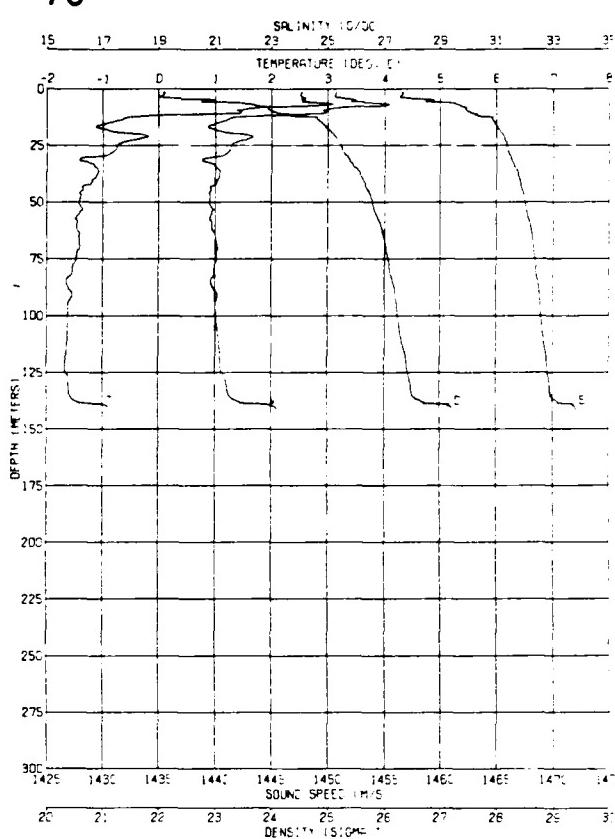
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (1/oo)
5.2	2.36	1451.2	22.83	28.56
10.1	2.30	1451.1	22.84	28.56
15.3	2.16	1453.0	23.74	29.70
20.1	-1.28	1439.2	24.64	30.62
25.2	-1.18	1439.4	24.95	31.01
30.1	-1.51	1438.7	25.48	31.66
35.0	-1.34	1439.4	25.68	31.90
40.2	.39	1446.9	25.82	32.15
45.0	1.01	1450.2	25.85	32.22
50.0	1.08	1451.0	25.84	32.23
55.2	.63	1449.5	25.89	32.26
60.2	.31	1448.1	25.91	32.27
65.2	-.03	1446.7	25.94	32.29
70.2	-.57	1444.5	26.02	32.36
75.0	-.85	1443.3	26.06	32.40
80.2	-.95	1442.7	26.09	32.42
85.0	-1.03	1442.5	26.11	32.44
90.1	-1.28	1441.5	26.14	32.48
95.1	-1.43	1440.9	26.17	32.51
100.4	-1.50	1440.7	26.20	32.54
110.2	-1.68	1440.1	26.28	32.63
120.0	-1.69	1440.2	26.32	32.68
130.1	-1.66	1440.5	26.35	32.72
135.9	-1.59	1441.0	26.41	32.80

Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude  
 69 X X 245 2000 Ship 71 41.3 155 35.9  
 70

69



70



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY

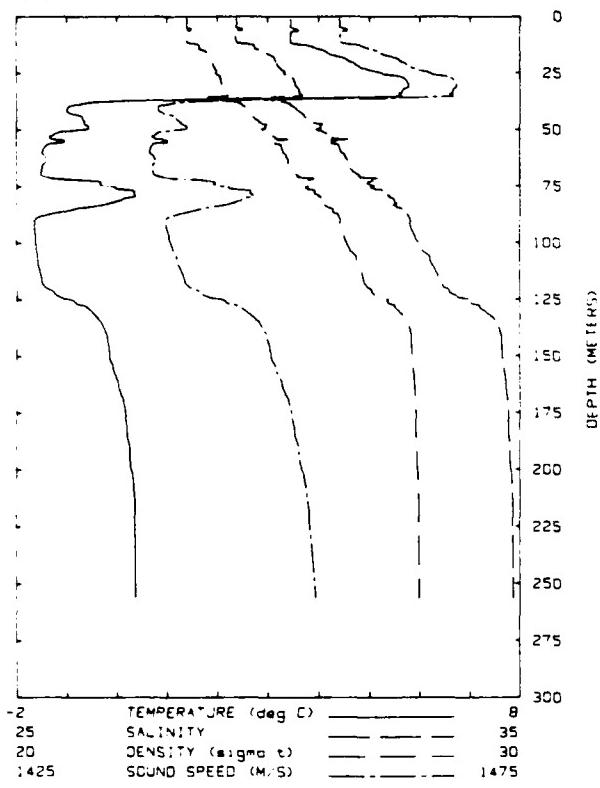
2.0	2.0	2.48	24.957	27.364	21.866	1450.2
1.7	1.7	2.45	24.920	27.348	21.855	1450.0
5.0	5.0	2.66	26.377	28.913	23.087	1453.0
9.8	9.8	3.20	27.455	29.718	23.688	1456.5
14.8	14.7	1.92	26.576	29.836	23.873	1451.1
19.7	19.6	-0.02	25.595	30.474	24.484	1443.2
24.6	24.5	-0.37	25.937	31.271	25.138	1442.0
29.4	29.3	-1.43	25.338	31.566	25.487	1438.0
34.4	34.2	-1.08	25.785	31.804	25.592	1440.3
39.3	39.1	-1.19	25.769	31.898	25.670	1440.0
44.2	44.0	-1.46	25.690	32.005	25.761	1439.2
49.6	49.3	-1.43	25.715	32.077	25.811	1439.2
55.7	55.3	-1.45	25.797	32.288	25.920	1439.4
61.7	61.3	-1.44	25.856	32.270	25.977	1439.6
67.6	67.4	-1.42	25.922	32.353	26.044	1439.8
74.0	73.5	-1.49	25.923	31.407	26.068	1439.8
79.9	75.4	-1.54	25.914	31.445	26.121	1439.7
86.6	85.5	-1.61	25.921	31.535	26.195	1439.6
92.2	91.6	-1.56	25.993	32.575	26.127	1440.0
98.4	97.8	-1.64	25.969	32.616	26.262	1439.8
104.4	103.7	-1.64	25.997	32.651	26.290	1439.9
110.5	109.7	-1.64	26.038	32.704	26.333	1440.1
116.6	115.8	-1.66	26.073	32.773	26.389	1440.0
120.0	119.9	-1.66	26.092	32.796	26.400	1440.3
122.7	121.8	-1.66	26.112	32.826	26.432	1440.3
122.7	121.9	-1.66	26.119	32.836	26.446	1440.3
122.8	122.0	-1.66	26.117	32.836	26.448	1440.3

DEPTH (M) T (C) V (M/S) DENSITY S (‰)

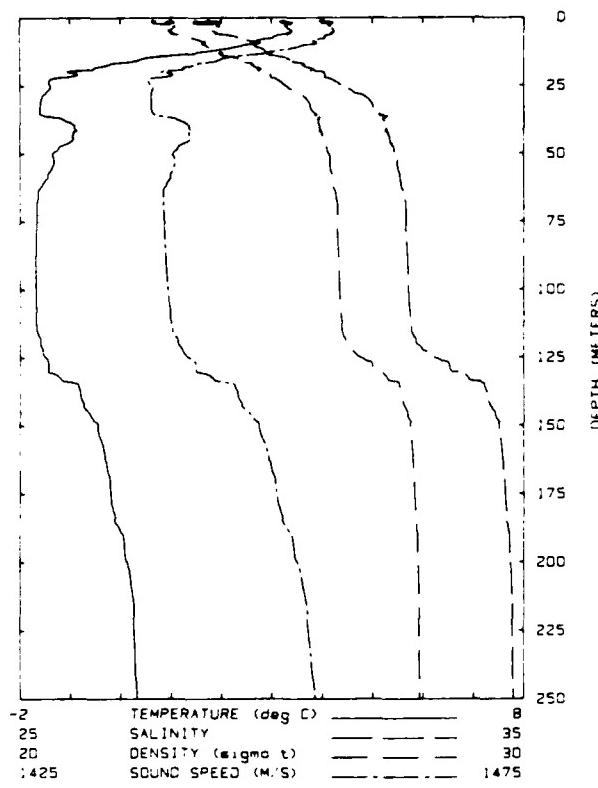
5.1	2.58	1452.5	23.01	32.80
10.3	1.46	1449.8	24.08	30.06
15.0	-0.91	1440.4	24.84	30.86
20.4	-0.27	1443.0	25.09	31.21
25.4	-0.75	1441.4	25.23	31.36
30.1	-1.14	1440.1	25.28	31.42
35.1	-1.10	1440.3	25.50	31.68
40.2	-1.18	1440.2	25.61	31.83
45.1	-1.35	1439.7	25.71	31.94
50.2	-1.42	1439.5	25.77	32.01
55.3	-1.42	1439.7	25.84	32.09
60.1	-1.45	1439.7	25.92	32.20
65.2	-1.42	1440.0	25.98	32.27
70.2	-1.41	1440.2	26.02	32.33
75.3	-1.47	1440.1	26.06	32.38
80.5	-1.53	1440.0	26.10	32.42
85.3	-1.64	1439.6	26.15	32.47
90.1	-1.54	1440.2	26.19	32.53
95.3	-1.62	1440.0	26.22	32.57
100.1	-1.62	1440.1	26.25	32.60
110.1	-1.63	1440.3	26.30	32.67
120.1	-1.67	1440.5	26.40	32.79
130.3	-1.61	1441.0	26.48	32.89
140.3	-0.90	1445.4	27.21	33.81
142.3	-0.91	1445.6	27.25	33.86

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
71	X		245	2121	Ship	71 44.4	155 8.5
72	X		245	2351	Ship	71 55.6	155 1.3

71



72

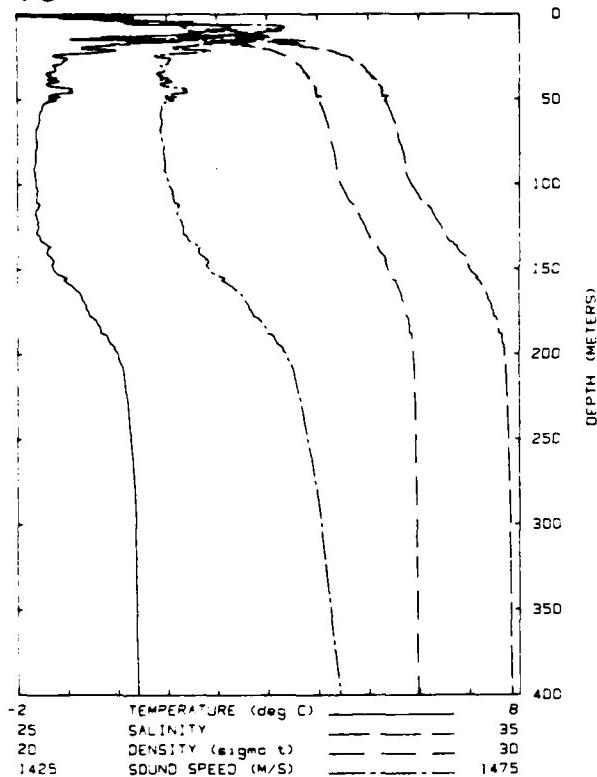


PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
8.8	8.8	3.81	27.472	29.383	23.371	1457.7
15.9	15.9	4.16	26.416	28.060	23.784	1461.0
25.2	25.1	5.24	28.589	30.326	23.976	1468.1
34.1	33.0	5.84	30.175	30.815	24.158	1468.2
43.3	43.1	-0.80	25.087	30.888	24.883	1439.8
52.5	52.2	-1.25	25.193	31.187	25.080	1438.9
62.0	61.6	-1.44	25.305	31.515	25.388	1438.6
72.2	71.7	-1.27	25.845	32.198	25.915	1440.5
81.4	80.9	0.10	27.258	32.487	28.098	1447.5
90.8	90.3	-1.84	28.107	32.818	28.423	1439.9
100.3	99.6	-1.82	28.242	32.978	28.553	1440.4
110.1	109.4	-1.57	28.482	33.244	28.769	1441.1
118.3	118.5	-1.48	28.704	33.443	28.926	1442.0
128.6	127.7	-0.87	27.935	34.204	27.518	1447.0
137.6	136.7	-0.27	28.550	34.576	27.706	1449.4
146.6	145.5	-0.18	28.704	34.848	27.849	1450.2
155.5	154.4	-0.08	28.808	34.664	27.876	1450.8
163.6	162.4	0.03	28.928	34.721	27.900	1451.4
171.4	170.1	0.13	29.045	34.753	27.920	1452.1
178.8	177.5	0.19	28.108	34.772	27.933	1452.5
186.1	184.7	0.22	28.148	34.784	27.940	1452.8
193.1	191.6	0.27	28.211	34.806	27.955	1453.1
200.5	198.9	0.29	28.237	34.815	27.962	1453.3
207.7	208.1	0.34	28.307	34.840	27.978	1453.7
215.7	214.0	0.37	29.329	34.850	27.985	1454.0
222.5	220.8	0.37	28.349	34.855	27.989	1454.1
230.2	228.4	0.37	28.380	34.881	27.993	1454.3
238.3	236.3	0.38	28.370	34.883	27.995	1454.4
246.4	244.6	0.38	28.375	34.885	27.997	1454.8
254.9	252.7	0.38	28.381	34.888	27.999	1454.7

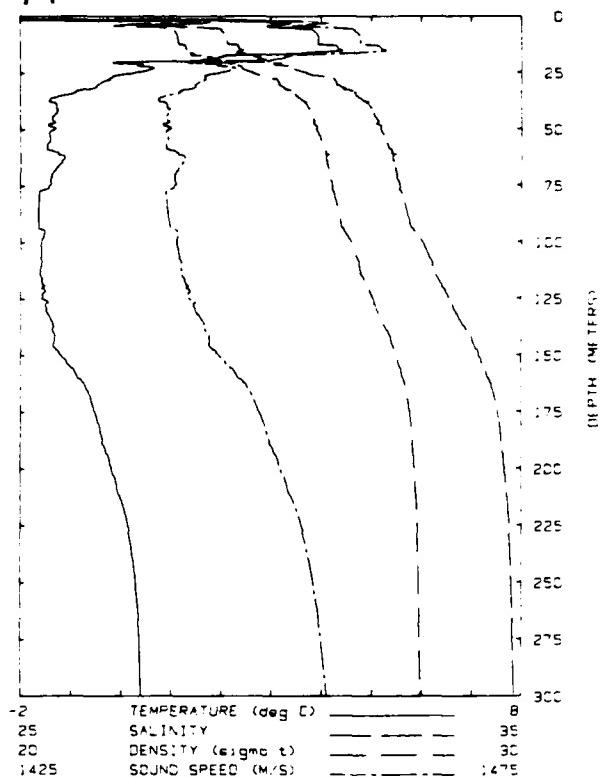
PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
8.8	3.2	3.25	26.678	28.980	23.085	1455.7
15.9	10.7	10.8	2.38	28.787	23.713	1452.9
25.2	16.9	-0.06	25.822	30.545	24.542	1443.1
34.1	22.3	-1.19	25.144	31.062	24.994	1438.6
43.3	27.6	-1.47	25.338	31.808	25.442	1438.1
52.5	32.0	-1.60	25.528	32.004	25.785	1438.1
62.0	37.0	-1.14	26.051	32.228	25.933	1440.6
72.2	43.0	-0.92	28.288	32.321	26.003	1441.8
81.4	48.0	-1.23	28.195	32.435	26.105	1440.7
90.8	55.0	-1.34	28.082	32.490	26.153	1440.3
100.3	61.5	-1.54	25.894	32.566	26.219	1439.6
110.1	68.1	-1.65	25.968	32.654	26.492	1439.3
118.3	74.1	-1.66	25.971	32.864	26.301	1439.3
128.6	80.0	-1.67	25.978	32.679	26.313	1439.4
137.6	87.2	-0.68	25.986	32.695	26.326	1439.5
146.6	93.5	-1.69	25.993	32.708	26.334	1439.6
155.5	99.9	-1.69	25.988	32.712	26.340	1439.7
163.6	105.0	-1.68	26.013	32.726	26.352	1439.8
171.4	112.2	-1.69	26.041	32.785	26.383	1439.9
178.8	118.5	-1.80	26.168	32.838	26.441	1440.6
186.1	124.7	-1.53	26.437	33.134	26.879	1441.4
193.1	131.0	-1.44	26.823	33.556	27.018	1442.5
200.5	137.3	-1.82	27.837	34.240	27.551	1446.4
207.7	143.0	-0.74	27.976	34.333	27.623	1447.0
215.7	214.5	-0.48	28.348	34.528	27.784	1448.8
222.5	149.0	-0.48	28.428	34.538	27.774	1449.1
230.2	155.0	-0.39	28.428	34.582	27.805	1449.8
238.3	161.1	-0.31	28.531	34.582	27.805	1449.8
246.4	168.6	-0.28	28.592	34.800	27.817	1450.0
254.9	173.2	-0.20	28.884	34.825	27.835	1450.4
254.9	179.1	-0.16	28.695	34.637	27.843	1450.6
254.9	185.1	-0.11	28.780	34.885	27.862	1451.1
254.9	190.4	0.02	28.823	34.713	27.884	1451.8
254.9	195.5	0.08	28.880	34.721	27.887	1452.2
254.9	200.7	0.11	28.023	34.735	27.907	1452.4
254.9	205.9	0.19	29.107	34.749	27.914	1452.9
254.9	211.3	0.22	29.147	34.784	27.924	1453.1
254.9	218.5	0.26	29.198	34.780	27.935	1453.4
254.9	221.5	0.27	29.207	34.777	27.932	1453.6
254.9	227.1	0.28	29.218	34.782	27.935	1453.7
254.9	232.6	0.29	29.235	34.785	27.937	1453.8
254.9	238.1	0.30	29.239	34.784	27.938	1453.9
254.9	243.4	0.30	29.248	34.785	27.937	1454.1
254.9	249.0	0.33	29.280	34.788	27.944	1454.3
254.9	252.2	0.35	29.309	34.806	27.951	1454.5
254.9	258.6	0.36	29.317	34.808	27.952	1454.5

Station Number	ASL Cast	APL Cast	Julian Day	GMT hmmm	Platform	Latitude	Longitude
73	X		246	0109	Ship	72 3.9	154 53.9
74	X		246	0254	Ship	72 13.5	154 48.1

73



74

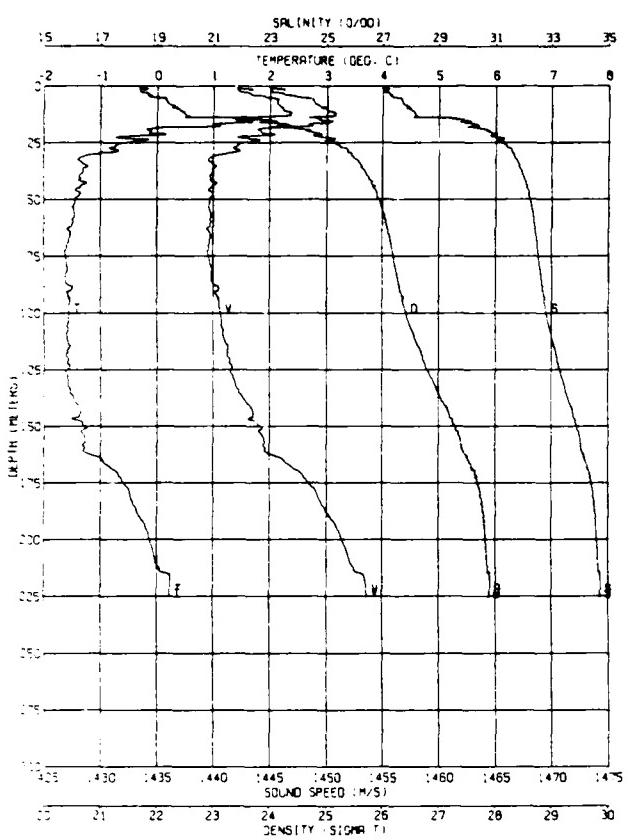


PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY (kg/m³)	SOUND VELOCITY (m/sec.)
1.8	1.8	-0.11	22.072	25.994	20.884	1436.5
4.2	4.2	-0.25	23.408	27.844	22.375	1438.4
9.1	9.1	1.84	25.898	29.198	23.358	1449.8
14.3	14.3	0.39	25.182	28.513	23.894	1443.8
19.8	19.5	-0.59	25.380	30.738	24.718	1440.9
25.1	25.0	-1.25	25.470	31.556	25.395	1439.0
31.5	31.3	-1.25	25.728	31.804	25.678	1436.6
38.1	37.9	-1.20	25.884	32.084	25.804	1440.1
44.3	44.1	-0.88	26.276	32.249	25.844	1442.0
50.4	50.1	-1.24	26.081	32.345	26.033	1440.5
55.9	55.6	-1.50	25.910	32.411	26.092	1439.5
62.2	61.9	-1.55	25.933	32.456	26.153	1439.4
68.4	68.0	-1.63	25.926	32.568	26.223	1439.3
74.8	74.3	-1.62	25.857	32.597	26.246	1439.4
81.1	80.6	-1.64	26.001	32.678	26.312	1439.5
86.7	86.2	-1.84	26.031	32.717	26.343	1439.7
92.9	92.3	-1.65	26.045	32.750	26.371	1439.8
99.3	98.6	-1.62	26.134	32.829	26.434	1440.1
105.7	105.0	-1.61	26.238	32.853	26.534	1440.5
112.0	111.3	-1.59	26.380	33.121	26.659	1440.9
117.4	116.8	-1.64	26.449	33.268	26.780	1441.0
123.5	122.6	-1.59	26.568	33.378	26.877	1441.4
129.7	128.8	-1.62	26.631	33.496	26.974	1441.5
136.2	135.2	-1.44	26.815	33.840	27.119	1442.7
142.4	141.4	-1.41	27.075	33.860	27.263	1443.2
147.8	146.7	-1.28	27.250	33.858	27.339	1444.0
154.0	152.9	-1.20	27.430	34.101	27.452	1444.8
160.3	159.1	-0.85	27.747	34.250	27.564	1446.2
166.7	165.5	-0.73	28.023	34.375	27.657	1447.5
173.4	172.1	-0.64	28.181	34.446	27.709	1448.2
178.9	177.6	-0.57	28.255	34.493	27.745	1448.6
184.5	183.1	-0.40	28.474	34.591	27.816	1449.8
189.8	188.4	-0.28	28.827	34.659	27.874	1450.3
195.1	193.6	-0.17	28.724	34.650	27.859	1450.9
200.6	199.3	-0.01	28.900	34.708	27.991	1451.6
206.3	204.7	0.04	28.980	34.723	27.901	1452.2
211.8	210.2	0.11	29.030	34.735	27.807	1452.6
217.7	216.0	0.13	29.059	34.743	27.812	1452.8
223.4	221.8	0.15	29.081	34.746	27.814	1453.0
229.4	227.6	0.19	29.123	34.758	27.821	1453.3
235.0	233.9	0.21	29.150	34.765	27.825	1453.5
242.2	240.3	0.22	29.184	34.768	27.926	1453.6
249.3	246.3	0.25	29.182	34.775	27.931	1453.9
254.7	252.6	0.27	29.225	34.781	27.937	1454.1
261.3	259.1	0.29	29.248	34.788	27.954	1455.2
267.7	265.5	0.31	29.273	34.784	27.944	1454.5
274.4	272.0	0.32	29.281	34.789	27.947	1454.7
281.1	278.7	0.34	29.311	34.804	27.950	1454.9
287.7	285.2	0.35	29.323	34.807	27.952	1455.0
294.5	292.0	0.38	29.336	34.810	27.954	1455.2
301.0	299.4	0.38	29.346	34.814	27.956	1455.3
306.8	304.1	0.38	29.351	34.815	27.957	1455.4
312.7	309.9	0.37	29.356	34.816	27.958	1455.5

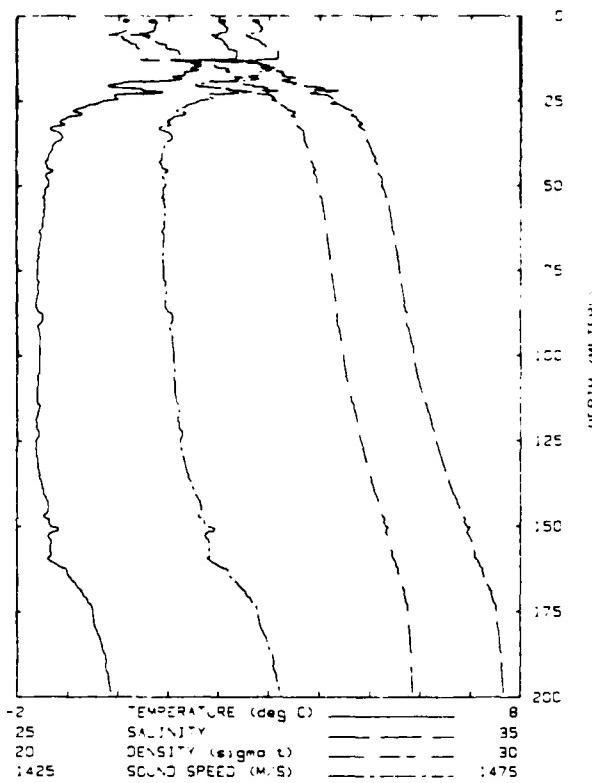
PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY (kg/m³)	SOUND VELOCITY (m/sec.)
1.8	1.8	2.07	23.818	26.334	21.070	1447.0
4.1	4.1	3.18	25.686	27.630	22.029	1453.8
9.5	9.5	3.85	27.510	28.103	23.135	1458.9
14.7	14.7	4.34	28.048	28.372	23.312	1461.0
19.9	19.4	4.68	28.417	28.861	23.807	1450.2
24.4	24.2	0.52	28.088	30.548	24.520	1445.9
29.3	29.1	-0.37	25.650	31.293	25.156	1442.8
34.1	34.0	-0.82	25.788	31.649	25.461	1440.9
39.1	38.9	-1.27	25.733	31.835	25.702	1439.6
44.1	43.8	-1.31	25.788	32.052	25.787	1438.7
49.3	49.0	-1.37	25.851	32.193	25.813	1439.7
54.2	53.9	-1.40	25.887	32.270	25.983	1439.7
59.1	58.8	-1.49	25.884	32.381	26.051	1439.5
64.2	63.8	-1.17	26.179	32.415	26.087	1441.2
69.2	68.8	-1.35	26.083	32.475	26.141	1440.5
74.5	74.0	-1.38	26.119	32.561	26.211	1445.5
79.5	79.0	-1.63	25.861	32.611	26.256	1439.5
84.6	84.1	-1.84	26.005	32.679	26.313	1439.6
89.6	89.0	-1.85	26.039	32.733	26.356	1439.7
94.6	94.0	-1.84	26.109	32.813	26.421	1440.0
99.6	99.0	-1.58	26.279	32.984	26.558	1445.5
104.6	103.9	-1.59	26.350	33.094	26.647	1445.5
109.6	108.9	-1.50	26.442	33.204	26.737	1441.0
114.6	113.8	-1.61	26.470	33.267	26.788	1441.0
119.7	118.9	-1.55	26.630	33.420	26.910	1441.6
124.7	123.9	-1.54	26.728	33.537	27.005	1441.8
129.8	128.9	-1.48	26.850	33.648	27.094	1442.4
134.9	134.0	-1.40	27.006	33.761	27.183	1443.0
139.8	138.8	-1.38	27.132	33.804	27.288	1443.4
144.6	143.8	-1.34	27.243	34.013	27.386	1443.8
149.8	148.5	-1.24	27.412	34.130	27.477	1444.5
154.4	153.3	-1.08	27.806	34.207	27.534	1445.5
159.4	158.3	-0.80	27.835	34.309	27.608	1446.5
164.4	163.2	-0.72	28.058	34.402	27.676	1447.6
169.4	168.1	-0.62	28.190	34.485	27.724	1448.2
174.2	172.0	-0.55	28.276	34.508	27.754	1448.6
179.1	177.8	-0.48	28.364	34.542	27.780	1449.1
183.8	182.5	-0.42	28.445	34.575	27.804	1449.5
188.6	187.2	-0.37	28.500	34.592	27.816	1449.8
193.4	191.9	-0.30	28.587	34.621	27.836	1450.3
198.3	198.7	-0.22	28.681	34.650	27.855	1450.8
203.2	201.8	-0.17	28.737	34.688	27.887	1451.1
208.1	206.5	-0.09	28.827	34.892	27.883	1451.6
213.0	211.3	-0.04	28.876	34.704	27.880	1451.8
217.9	216.1	0.05	28.973	34.728	27.804	1452.4
222.7	221.0	0.11	29.042	34.747	27.816	1452.8
227.7	225.0	0.16	29.085	34.780	27.825	1453.1
232.6	230.9	0.19	29.130	34.788	27.828	1453.3
237.9	236.0	0.23	28.171	34.774	27.832	1453.6

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 75 X X 246 0531 Ship 72 4.1 155 36.6  
 76

75



76



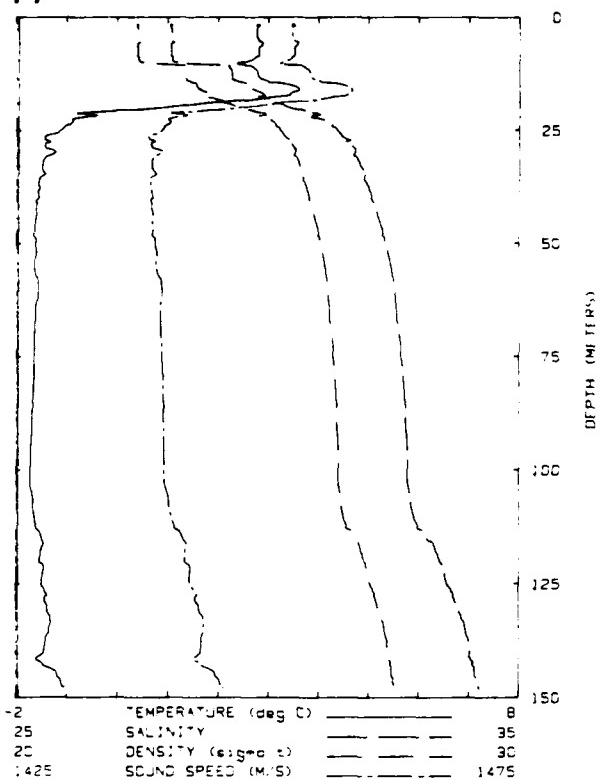
DEPTH (M) T (C) V (M/S) DENSITY S (‰)

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.2	20.01	1448.1	22.12	37.63
10.3	22.23	1449.9	22.39	38.00
15.3	14.45	1449.5	24.00	39.96
20.9	-1.16	1444.4	24.83	30.91
25.2	-0.67	1442.5	25.13	31.25
30.2	-1.16	1440.6	25.44	31.61
35.1	-1.23	1440.2	25.64	31.86
40.5	-1.35	1439.8	25.77	32.02
45.1	-1.43	1439.7	25.85	32.11
50.0	-1.45	1439.7	25.94	32.22
55.2	-1.47	1439.7	26.01	32.30
60.5	-1.51	1439.7	26.06	32.36
65.1	-1.53	1439.7	26.11	32.43
70.0	-1.60	1439.6	26.17	32.50
75.3	-1.62	1439.6	26.20	32.54
80.1	-1.60	1439.8	26.23	32.58
85.0	-1.63	1439.8	26.27	32.62
90.1	-1.53	1440.4	26.32	32.68
95.2	-1.54	1440.6	26.37	32.76
100.2	-1.56	1440.7	26.43	32.83
110.2	-1.60	1440.9	26.57	33.00
120.0	-1.57	1441.4	26.72	33.18
130.1	-1.57	1441.9	26.91	33.42
140.2	-1.42	1443.1	27.10	33.65
150.2	-1.26	1444.3	27.30	33.91
160.1	-1.29	1444.7	27.42	34.06
170.4	-0.72	1447.7	27.64	34.36
180.0	-0.49	1449.1	27.72	34.46
190.0	-0.30	1450.3	27.78	34.55
200.2	-0.12	1451.4	27.80	34.58
210.2	-0.02	1452.1	27.84	34.64
220.3	.23	1453.6	27.90	34.74
225.6	.23	1453.6	27.88	34.71

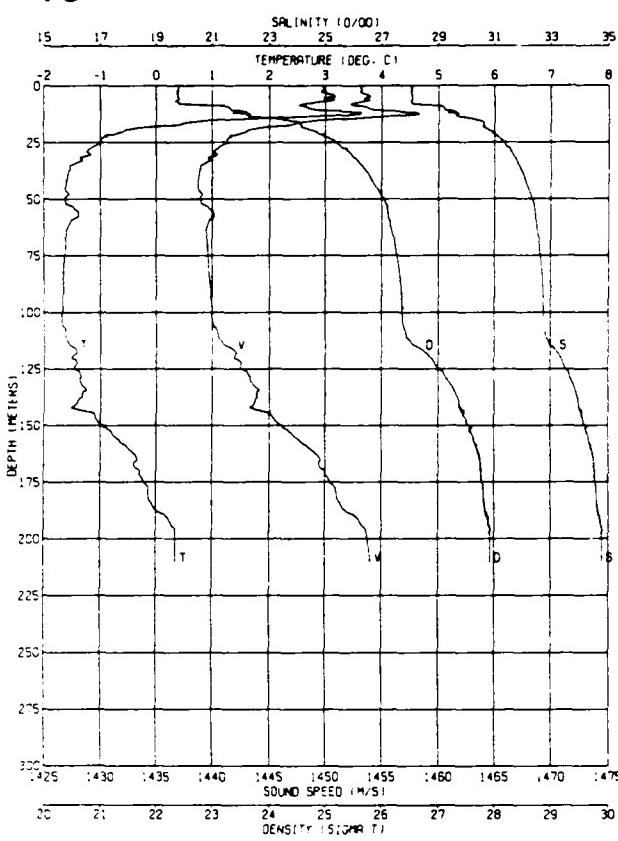
PRESSURE 'dbar'	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY m/sec
1.6	1.6	20.04	24.867	27.639	22.112	1448.6
6.0	6.0	20.01	24.835	27.616	22.095	1448.5
11.0	11.7	23.34	25.558	28.206	22.545	1450.8
16.0	16.7	12.28	26.424	30.281	24.251	1448.8
21.7	21.5	0.24	26.353	31.096	24.966	1445.8
26.6	26.4	-0.83	25.820	31.378	25.234	1441.7
31.5	31.4	-1.17	25.893	31.779	25.573	1439.9
36.8	36.4	-1.14	25.830	31.922	25.688	1440.2
41.5	41.3	-1.40	25.718	32.052	25.799	1439.2
46.4	46.2	-1.35	25.821	32.133	25.864	1439.7
51.4	51.1	-1.46	25.827	32.255	25.965	1439.4
56.4	58.1	-1.47	25.896	32.360	26.050	1439.5
61.3	61.0	-1.52	25.894	32.408	26.091	1439.5
66.3	65.9	-1.55	25.919	32.475	26.145	1439.5
71.3	70.8	-1.60	25.933	32.550	26.207	1439.4
76.1	75.7	-1.62	25.940	32.574	26.227	1439.4
81.0	80.5	-1.61	25.988	32.629	26.271	1439.6
85.9	85.3	-1.64	26.000	32.673	26.308	1439.6
90.6	90.0	-1.53	26.122	32.714	26.338	1440.3
95.4	94.8	-1.56	26.157	32.795	26.404	1440.3
100.0	99.4	-1.58	26.200	32.858	26.454	1440.5
104.8	104.1	-1.59	26.230	32.907	26.496	1440.5
109.6	108.9	-1.59	26.278	32.992	26.585	1440.6
114.5	113.8	-1.80	26.335	33.077	26.634	1440.8
119.6	119.0	-1.84	26.406	33.207	26.740	1440.9
125.4	124.5	-1.82	26.472	33.281	26.800	1441.2
130.8	130.0	-1.59	26.802	33.424	26.915	1441.6
135.2	135.3	-1.56	26.709	33.531	27.001	1442.0
141.2	140.2	-1.48	26.884	33.853	27.098	1442.6
146.5	145.5	-1.39	27.054	33.807	27.220	1443.3
151.0	150.8	-1.18	27.348	33.947	27.326	1444.7
157.3	156.2	-1.34	27.292	34.069	27.430	1444.1
162.6	161.4	-1.19	27.495	34.178	27.514	1445.0
167.8	166.3	-0.86	27.800	34.333	27.628	1446.9
172.7	171.4	-0.59	28.203	34.454	27.714	1448.4
177.4	176.0	-0.48	28.358	34.535	27.775	1449.0
182.0	180.7	-0.41	28.444	34.585	27.798	1449.5
187.0	185.8	-0.30	28.558	34.591	27.812	1450.1
191.8	190.4	-0.23	28.648	34.631	27.841	1450.6
196.8	195.1	-0.17	28.717	34.651	27.854	1450.9
200.8	199.4	-0.14	28.760	34.683	27.882	1451.2

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
77	X		246	0650	Ship	72 1.9	155 29.6
78		X					

77



78



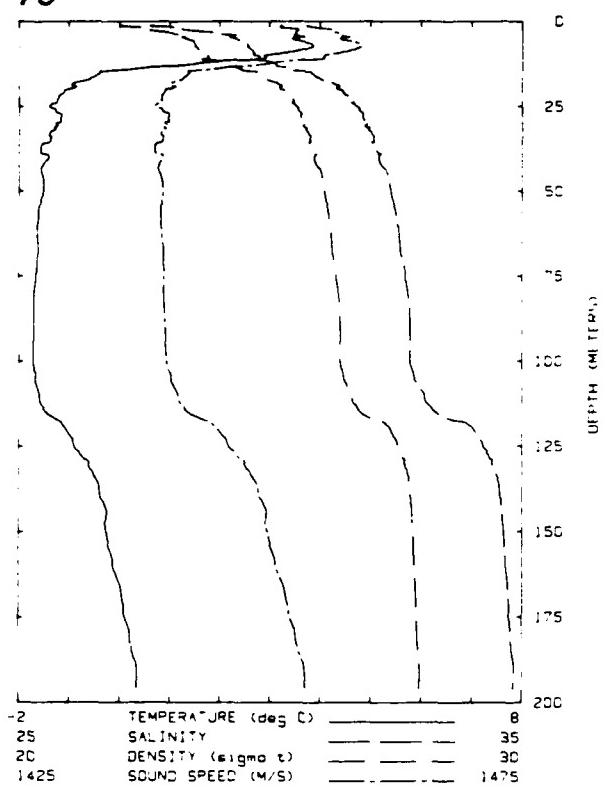
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec.)
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PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec.)
2.0	2.0	2.83	25.775	28.046	22.385	1452.6
1.7	1.7	2.80	25.764	28.055	22.394	1452.5
6.4	6.4	2.85	25.808	28.060	22.394	1452.8
11.2	11.2	2.70	26.854	29.209	23.319	1453.7
16.2	16.1	3.61	27.777	29.716	23.650	1458.3
21.0	20.9	-0.19	25.898	30.771	24.729	1442.9
26.3	26.1	-1.37	25.306	31.460	25.319	1438.3
31.8	31.8	-1.47	25.457	31.785	25.585	1438.4
35.0	34.8	-1.42	25.806	31.921	25.893	1438.9
35.9	35.7	-1.54	25.506	31.911	25.889	1438.3
39.8	39.6	-1.55	25.601	32.053	25.803	1438.5
44.9	44.8	-1.62	25.653	32.198	25.923	1438.4
50.1	49.8	-1.61	25.761	32.334	26.033	1438.7
55.2	54.9	-1.65	25.813	32.441	26.119	1438.8
60.2	59.8	-1.57	25.936	32.520	26.182	1439.4
65.2	64.8	-1.63	25.924	32.566	26.221	1439.2
70.2	69.7	-1.66	25.939	32.614	26.260	1439.2
75.1	74.8	-1.65	25.976	32.653	26.292	1439.4
80.0	79.5	-1.85	26.012	32.702	26.332	1439.5
84.8	84.3	-1.68	26.008	32.726	26.352	1439.5
89.7	89.1	-1.69	26.021	32.754	26.374	1439.6
94.6	94.1	-1.71	26.031	32.781	26.397	1439.6
99.5	98.8	-1.72	26.030	32.780	26.404	1439.6
104.3	103.7	-1.71	26.051	32.807	26.418	1439.6
109.1	108.4	-1.66	26.136	32.868	26.466	1440.2
114.0	113.2	-1.56	26.387	33.100	26.652	1441.0
118.8	118.0	-1.51	26.614	33.363	26.863	1441.7
123.7	122.8	-1.48	26.770	33.529	26.997	1442.2
128.7	127.8	-1.40	26.980	33.701	27.134	1442.8
133.3	132.4	-1.31	27.154	33.862	27.262	1443.6
138.1	137.1	-1.41	27.170	33.989	27.376	1443.3
142.9	141.9	-1.57	27.099	34.083	27.449	1442.8
147.7	146.8	-1.10	27.556	34.168	27.503	1445.2
148.7	147.8	-1.04	27.847	34.222	27.544	1445.6

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰/00)
5.1	3.12	1453.9	22.39	28.07
10.4	2.78	1454.1	23.32	29.21
15.1	.96	1449.5	24.33	30.36
20.3	-.59	1442.9	24.84	30.90
25.1	-.98	1441.3	25.21	31.34
30.3	-1.17	1440.4	25.47	31.65
35.3	-1.55	1438.9	25.64	31.86
40.3	-1.60	1438.8	25.80	32.05
45.0	-1.63	1438.8	25.93	32.20
50.0	-1.63	1439.0	26.04	32.34
55.2	-1.42	1440.0	26.12	32.44
60.2	-1.55	1439.7	26.15	32.46
65.3	-1.61	1439.5	26.19	32.53
70.2	-1.62	1439.6	26.24	32.59
75.0	-1.64	1439.6	26.27	32.63
80.2	-1.66	1439.7	26.31	32.67
85.3	-1.67	1439.7	26.33	32.70
90.3	-1.66	1439.9	26.35	32.72
95.3	-1.67	1440.0	26.37	32.74
100.2	-1.68	1440.0	26.37	32.75
110.1	-1.63	1440.5	26.44	32.83
120.0	-1.52	1441.9	26.87	33.37
130.4	-1.37	1443.3	27.16	33.75
140.2	-1.43	1443.6	27.37	33.99
150.9	-.95	1446.2	27.62	34.31
160.2	-.49	1448.7	27.71	34.45
170.1	-.29	1450.0	27.77	34.54
180.0	-.14	1451.0	27.82	34.61
190.0	.18	1452.7	27.90	34.73
200.1	.35	1453.8	27.93	34.78
210.1	.35	1454.0	27.93	34.78
210.1	.35	1454.0	27.93	34.78

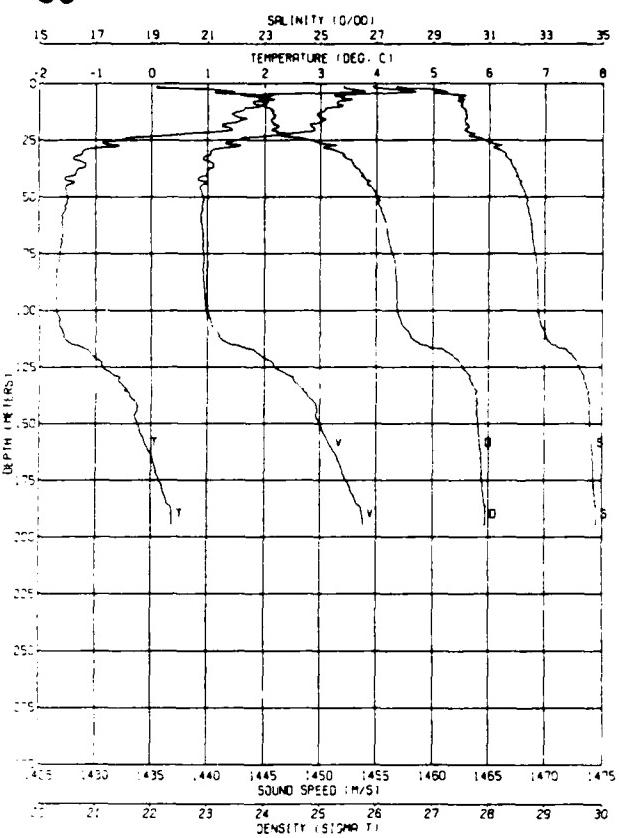
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
79	X		246	0813	Ship	71 58.1	155 26.6
80		X					

79



PRESSURE (dbar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/SEC.)
3.2	3.2	3.52	26.811	22.826	1456.4	
8.3	8.3	3.70	26.755	23.581	1458.5	
13.7	13.6	0.59	25.904	20.270	1445.7	
19.0	19.9	-0.95	25.557	31.371	1440.1	
24.3	24.2	-1.26	25.484	31.806	1439.0	
29.6	29.5	-1.16	25.770	31.872	1439.9	
35.1	34.9	-1.36	25.757	32.065	1439.3	
40.8	40.5	-1.41	25.787	32.187	1439.3	
46.4	46.1	-1.52	25.838	32.343	1439.1	
51.9	51.8	-1.53	25.885	32.416	1439.3	
57.4	57.1	-1.60	25.896	32.507	1439.1	
62.9	62.6	-1.82	25.926	32.567	1439.2	
68.3	67.9	-1.61	25.956	32.593	1439.4	
73.8	73.4	-1.85	25.988	32.676	1439.4	
79.4	78.9	-1.69	26.000	32.731	1439.4	
84.8	84.3	-1.71	26.018	32.771	1439.4	
89.2	89.7	-1.71	26.023	32.782	1439.5	
95.6	95.0	-1.71	26.026	32.784	1439.6	
101.2	100.5	-1.71	26.037	32.792	1439.7	
106.7	106.0	-1.67	26.143	32.893	1440.1	
112.1	111.3	-1.59	26.346	33.075	1440.6	
117.5	116.7	-1.30	26.898	33.508	1442.9	
122.9	122.1	-0.87	27.621	34.122	1445.4	
128.2	127.3	-0.79	27.919	34.316	1446.6	
133.6	132.7	-0.53	28.258	34.478	1448.1	
139.0	138.1	-0.39	28.446	34.565	1448.9	
144.2	143.2	-0.26	28.581	34.603	1449.6	
149.5	148.4	-0.28	28.589	34.826	1449.7	
154.8	153.7	-0.22	28.657	34.848	1450.1	
160.1	159.0	-0.13	28.760	34.875	1450.6	
165.3	164.1	-0.03	28.869	34.709	1451.2	
170.5	169.2	0.06	28.961	34.730	1451.7	
175.7	174.4	0.10	28.015	34.744	1452.0	
180.0	179.5	0.21	28.133	34.773	1452.6	
186.2	184.8	0.25	28.186	34.794	1452.9	
181.4	180.8	0.35	28.303	34.837	1453.5	
186.7	195.2	0.35	28.311	34.838	1453.6	

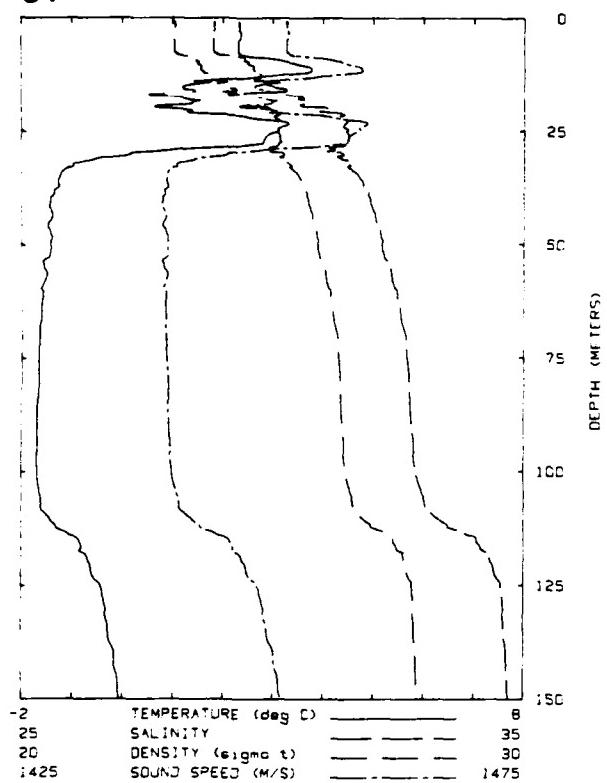
80



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (O/OO)
5.2	1.55	1451.2	24.13	30.15
10.1	1.90	1451.7	23.99	29.98
15.3	1.58	1450.2	24.18	30.19
20.5	1.42	1449.5	24.11	30.09
25.2	-0.64	1442.4	24.84	30.90
30.2	-1.24	1440.2	25.33	31.48
35.3	-1.19	1440.5	25.58	31.79
40.5	-1.38	1439.9	25.77	32.01
45.0	-1.53	1439.4	25.88	32.14
50.2	-1.51	1439.6	26.02	32.32
55.2	-1.54	1439.6	26.09	32.40
60.1	-1.60	1439.5	26.16	32.49
65.3	-1.60	1439.6	26.20	32.54
70.3	-1.62	1439.6	26.23	32.58
75.3	-1.65	1439.7	26.30	32.66
80.5	-1.69	1439.6	26.34	32.71
86.1	-1.70	1439.7	26.36	32.74
90.1	-1.71	1439.7	26.37	32.75
95.1	-1.71	1439.8	26.37	32.75
100.1	-1.70	1439.9	26.37	32.75
110.2	-1.58	1440.9	26.59	33.03
120.1	-1.05	1444.8	27.37	34.00
130.0	-0.58	1447.6	27.65	34.37
140.1	-0.30	1449.4	27.78	34.54
150.3	-0.24	1450.0	27.82	34.60
160.1	-0.09	1451.0	27.85	34.65
170.4	0.07	1451.9	27.88	34.69
180.4	0.22	1452.8	27.90	34.74
190.0	0.36	1453.7	27.94	34.80
194.8	0.37	1453.8	27.92	34.76

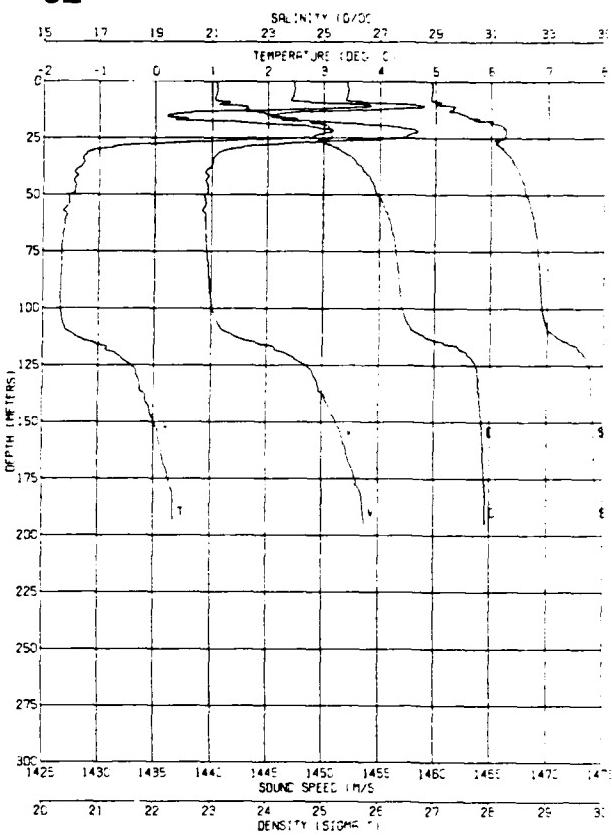
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
81	X		246	0920	Ship	71 56.7	155 23.4
82		X					

81



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
2.0	2.0	2.33	24.054	28.924	33.038	1451.4
5.5	5.5	2.31	26.030	28.821	33.036	1451.4
10.8	10.8	3.80	27.871	28.801	33.559	1458.1
15.0	15.0	1.24	26.438	30.317	24.298	1448.7
20.0	20.0	1.28	27.083	31.083	24.908	1450.0
26.0	25.9	2.89	28.706	31.504	25.131	1457.7
31.1	30.9	-0.45	25.953	31.370	25.221	1442.6
37.1	36.9	-1.26	25.634	31.792	25.586	1439.5
43.1	42.9	-1.39	25.708	32.024	25.777	1439.2
48.9	48.6	-1.42	25.792	32.163	25.890	1439.4
54.6	54.3	-1.55	25.804	32.325	26.024	1439.1
60.1	59.8	-1.63	25.836	32.447	26.125	1439.0
65.5	65.1	-1.61	25.926	32.552	26.209	1439.3
70.9	70.5	-1.65	25.967	32.652	26.291	1439.3
76.4	75.9	-1.66	25.993	32.693	26.325	1439.4
81.9	81.3	-1.67	26.016	32.727	26.352	1439.5
87.2	86.7	-1.69	26.028	32.761	26.380	1439.5
92.7	92.1	-1.69	28.051	32.787	26.409	1439.6
98.0	97.4	-1.69	28.079	32.828	26.434	1439.8
103.6	102.9	-1.66	26.170	32.923	26.511	1440.1
109.0	108.2	-1.60	26.310	33.052	26.614	1440.7
114.2	113.4	-1.11	27.278	33.817	27.219	1444.2
119.6	118.8	-0.70	27.987	34.317	27.608	1446.8
124.9	124.0	-0.51	28.299	34.523	27.766	1448.0
130.1	129.2	-0.35	28.479	34.580	27.805	1448.9
135.4	134.5	-0.28	28.584	34.604	27.821	1449.4
140.6	139.7	-0.18	28.701	34.649	27.851	1450.1
145.7	144.7	-0.09	28.781	34.677	27.871	1450.5
151.0	149.9	-0.05	28.839	34.702	27.889	1450.8

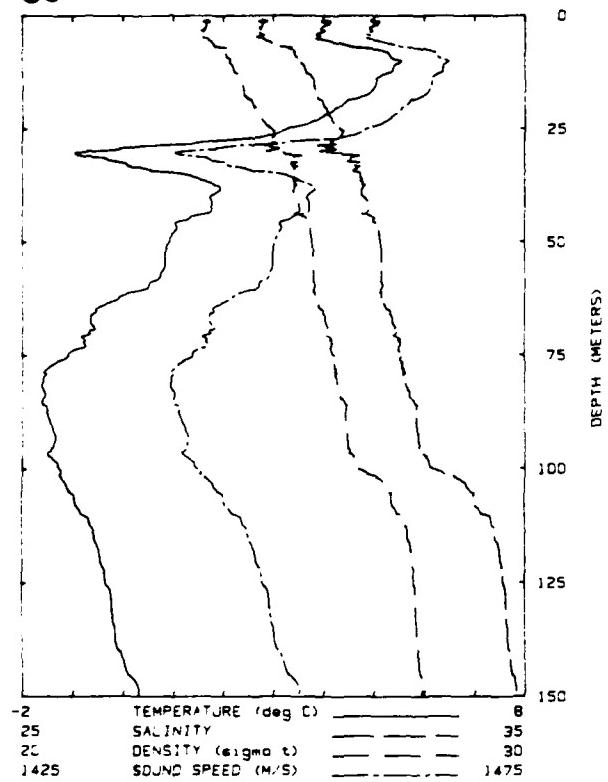
82



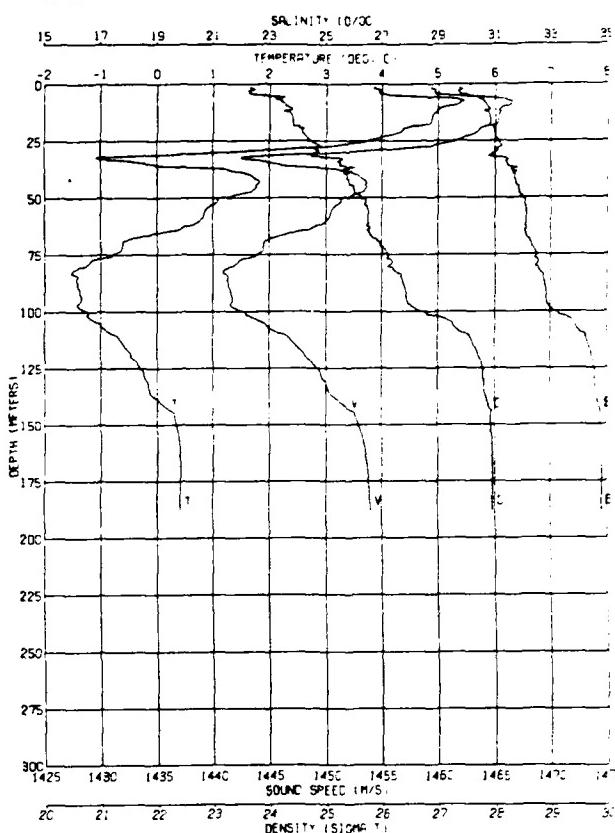
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.4	2.47	1452.2	23.08	38.88
10.1	3.36	1456.4	23.64	29.64
15.0	.24	1445.6	24.10	30.03
20.3	2.85	1456.9	25.06	31.39
25.1	2.63	1456.6	25.06	31.38
30.1	-1.01	1441.8	25.19	31.32
35.1	-1.27	1440.4	25.49	31.67
40.2	-1.44	1439.7	25.67	31.89
45.1	-1.43	1439.8	25.84	32.10
50.0	-1.52	1439.6	25.91	32.19
55.1	-1.55	1439.5	26.05	32.35
60.2	-1.59	1439.5	26.15	32.47
65.2	-1.62	1439.5	26.20	32.54
70.0	-1.64	1439.6	26.27	32.62
75.4	-1.65	1439.6	26.29	32.65
80.1	-1.66	1439.7	26.32	32.69
85.1	-1.67	1439.8	26.34	32.71
90.1	-1.68	1439.8	26.36	32.73
95.5	-1.68	1440.0	26.40	32.78
100.1	-1.68	1440.1	26.42	32.81
110.2	-1.54	1441.2	26.67	33.12
120.3	-.67	1446.8	27.60	34.31
130.3	-.31	1449.2	27.81	34.58
140.2	-.15	1450.3	27.84	34.63
150.3	.01	1451.3	27.87	34.68
160.1	.11	1452.0	27.89	34.71
170.1	.21	1452.6	27.91	34.74
180.3	.32	1453.4	27.93	34.77
190.4	.34	1453.7	27.93	34.77
195.4	.34	1453.7	27.90	34.74

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 83 X 246 1044 Ship 71 53.5 155 18.8  
 84 X

83



84

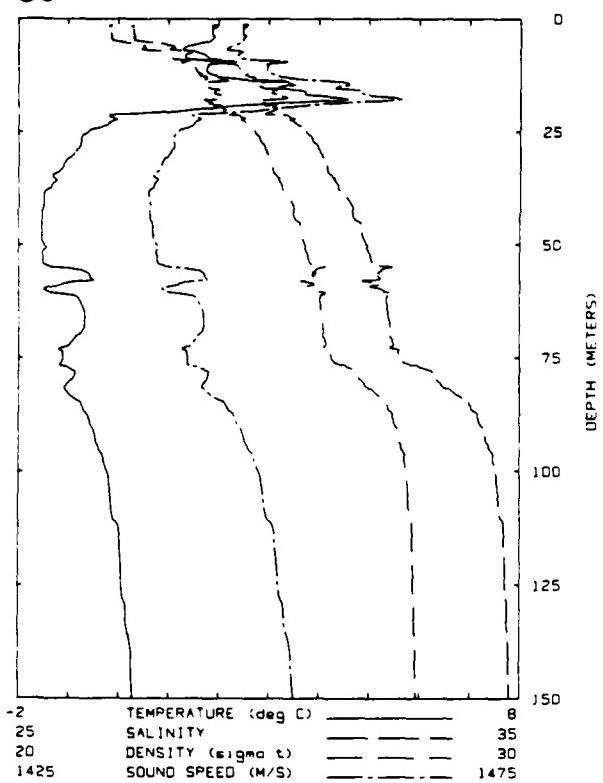


PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.3	1.3	8.87	28.107	38.785	23.874	1459.7
6.2	8.1	4.28	28.497	38.654	23.779	1461.3
11.4	11.4	5.39	28.866	38.620	24.181	1466.8
17.1	17.0	4.83	28.786	38.836	24.611	1465.3
22.2	22.1	4.01	28.287	38.117	24.725	1461.9
27.2	27.0	2.74	28.426	38.312	24.891	1456.8
32.2	32.0	-0.25	28.234	38.540	25.350	1443.8
37.3	37.1	1.76	28.013	38.768	25.426	1453.3
42.3	42.1	1.76	28.089	38.689	25.507	1453.5
47.5	47.2	1.07	28.728	38.105	25.738	1450.8
52.6	52.3	0.83	28.570	38.150	25.780	1449.9
57.7	57.3	0.73	28.505	38.160	25.803	1449.5
62.8	62.5	-0.08	28.880	38.178	25.857	1445.9
68.0	67.8	-0.85	28.560	38.369	26.034	1443.6
73.1	72.7	-0.75	28.582	38.520	26.159	1443.4
78.3	77.9	-1.49	28.016	38.534	26.181	1440.0
83.5	83.0	-1.57	28.084	38.713	26.338	1440.0
88.6	88.1	-1.49	28.242	38.835	26.436	1440.6
93.8	93.2	-1.34	28.394	38.682	26.470	1441.5
100.1	89.5	-1.30	28.603	38.115	26.657	1442.1
106.4	105.7	-0.98	28.517	38.987	27.351	1444.9
112.7	111.9	-0.88	28.030	38.336	27.822	1446.9
118.7	117.8	-0.48	28.308	38.497	27.744	1448.1
123.7	122.9	-0.36	28.463	38.566	27.795	1448.8
128.6	127.8	-0.23	28.617	38.621	27.833	1449.6
133.5	132.6	-0.20	28.649	38.629	27.838	1449.8
138.4	137.5	-0.15	28.713	38.653	27.854	1450.1
143.1	142.1	0.01	28.888	38.718	27.887	1451.0
147.9	146.8	0.25	28.175	38.810	27.959	1452.3
152.2	151.1	0.32	28.249	38.825	27.980	1452.7

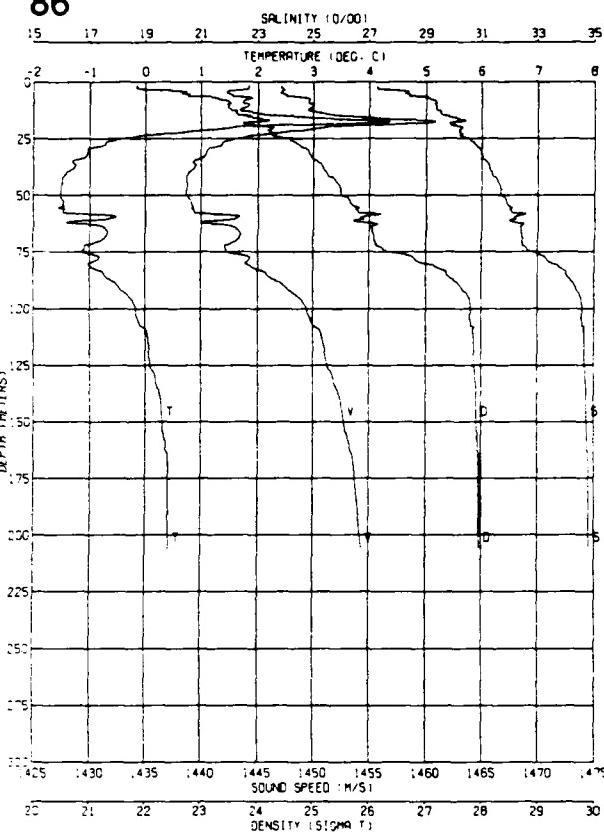
DEPTH (m)	T (C)	V (M/S)	DENSITY	S (10/0‰)
5.1	4.42	1461.7	23.91	30.10
10.3	5.09	1465.7	24.36	30.76
15.1	4.88	1465.3	24.42	30.82
20.1	4.37	1463.6	24.57	30.96
25.1	3.74	1461.5	24.76	31.13
30.2	1.04	1451.2	24.86	31.04
35.3	-0.07	1445.9	25.27	31.46
40.2	1.69	1452.9	25.37	31.69
45.1	1.77	1453.6	25.50	31.86
50.3	1.08	1451.3	25.65	32.00
55.3	.86	1450.5	25.74	32.10
60.2	.77	1450.1	25.76	32.11
65.3	.04	1447.2	25.77	32.08
70.3	-.6C	1444.5	25.67	32.29
75.0	-.78	1443.9	26.12	32.48
80.1	-1.28	1441.8	26.10	32.43
85.1	-1.42	1441.3	26.34	32.73
90.2	-1.38	1441.5	26.42	32.81
95.5	-1.36	1441.7	26.46	32.87
100.4	-1.22	1442.8	26.77	33.26
110.3	-.73	1446.4	27.56	34.25
120.3	-.46	1448.3	27.74	34.49
130.0	-.21	1449.8	27.82	34.66
140.1	.05	1452.2	27.87	34.69
150.1	.34	1452.9	27.94	34.79
160.0	.40	1453.4	27.95	34.81
170.1	.41	1453.7	27.96	34.82
180.3	.41	1453.9	27.96	34.82
188.3	.41	1454.0	27.96	34.82

Station ASL APL Julian GMT Platform Latitude Longitude  
 Number Cast Cast Day hhmm Ship 71 50.3 155 14.7  
 85 X 246 1150  
 86 X

85



86

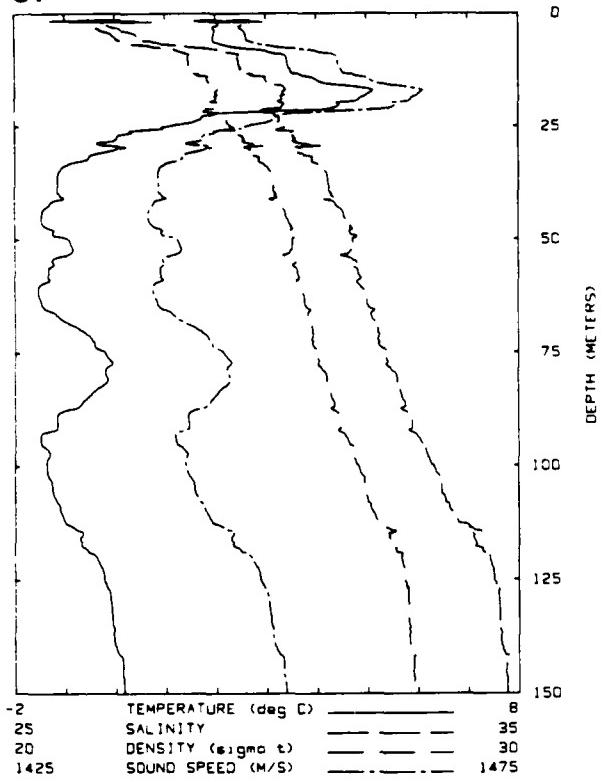


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.5	1.5	1.80	24.501	27.308	21.856	1447.5
2.7	2.7	1.87	24.476	27.308	21.857	1447.4
8.1	8.1	1.93	25.229	26.715	23.011	1446.9
13.2	13.1	2.07	26.597	26.720	23.770	1451.6
18.2	18.1	4.45	26.582	29.889	23.695	1462.1
23.3	23.1	-0.20	25.500	30.527	24.533	1442.5
28.3	28.1	-0.76	25.404	30.862	24.802	1440.8
33.5	33.4	-1.14	25.262	31.155	25.068	1439.1
38.9	38.7	-1.50	25.278	31.857	25.401	1438.0
46.5	46.2	-1.53	25.471	31.842	25.833	1436.4
52.8	52.5	-1.50	25.831	32.033	25.766	1438.9
58.0	58.7	-1.11	26.037	32.167	25.885	1441.0
65.4	65.0	-0.68	26.546	32.382	26.045	1443.5
71.3	70.8	-0.89	26.441	32.472	26.125	1442.7
77.2	76.8	-1.17	26.596	32.981	26.545	1442.1
83.3	82.8	-1.01	27.272	33.716	27.136	1444.0
89.0	88.5	-0.59	27.971	34.104	27.496	1446.7
94.3	93.7	-0.45	28.205	34.340	27.616	1447.8
99.5	98.8	-0.26	28.483	34.495	27.732	1448.8
104.7	104.0	-0.17	28.808	34.555	27.777	1449.4
109.8	109.1	-0.13	28.880	34.604	27.814	1449.7
115.0	114.2	0.03	28.878	34.685	27.871	1450.6
120.2	119.4	0.05	28.812	34.703	27.884	1450.8
125.3	124.4	0.07	28.837	34.712	27.890	1451.0
130.3	129.4	0.15	29.029	34.742	27.911	1451.5
135.4	134.5	0.10	29.073	34.761	27.924	1451.7
140.5	139.5	0.26	29.159	34.777	27.933	1452.2
145.5	144.5	0.27	29.178	34.766	27.939	1452.4
150.6	149.5	0.29	29.197	34.793	27.944	1452.5
153.6	152.5	0.30	29.208	34.786	27.946	1452.6

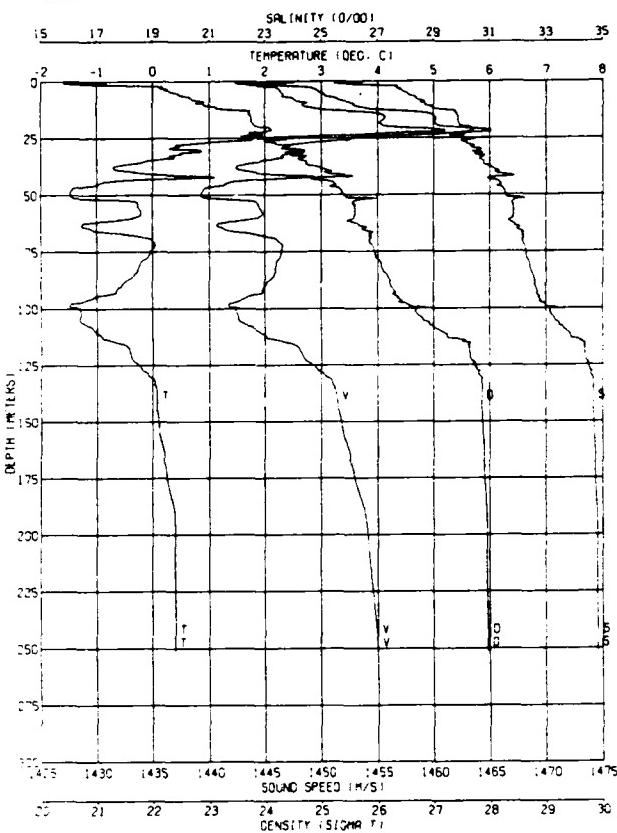
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/oo)
5.1	1.49	1447.1	22.65	28.27
10.4	1.83	1450.0	23.48	29.33
15.0	2.41	1452.7	23.86	29.84
20.1	1.54	1450.9	24.28	30.33
25.1	.51	1442.9	24.56	30.57
30.1	-1.03	1440.6	24.90	30.96
35.0	-1.32	1439.3	25.08	31.17
40.2	-1.43	1438.8	25.24	31.36
45.1	-1.51	1438.7	25.45	31.62
50.0	-1.52	1438.7	25.51	31.69
55.1	-1.50	1439.3	25.79	32.03
60.1	-.65	1443.0	25.86	32.15
65.2	-.70	1443.2	26.05	32.38
70.3	-.82	1443.1	26.11	32.46
75.3	-1.10	1442.6	26.52	32.95
80.2	-1.04	1443.9	27.00	33.55
85.3	-.73	1445.9	27.38	34.04
90.3	-.48	1447.5	27.63	34.36
95.2	-.27	1448.8	27.78	34.55
100.1	-.17	1449.4	27.81	34.59
110.2	.03	1450.7	27.85	34.66
120.1	.07	1451.1	27.87	34.68
130.1	.17	1451.8	27.89	34.72
140.1	.28	1452.5	27.91	34.75
150.1	.30	1452.8	27.92	34.76
160.1	.37	1453.3	27.94	34.80
170.4	.40	1453.7	27.96	34.82
180.3	.41	1453.9	27.96	34.82
190.2	.41	1454.1	27.96	34.82
200.1	.41	1454.2	27.96	34.82
205.6	.42	1454.3	27.96	34.82

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 87 X 246 1251 Ship 71 47.6 155 11.1  
 88 X

87



88

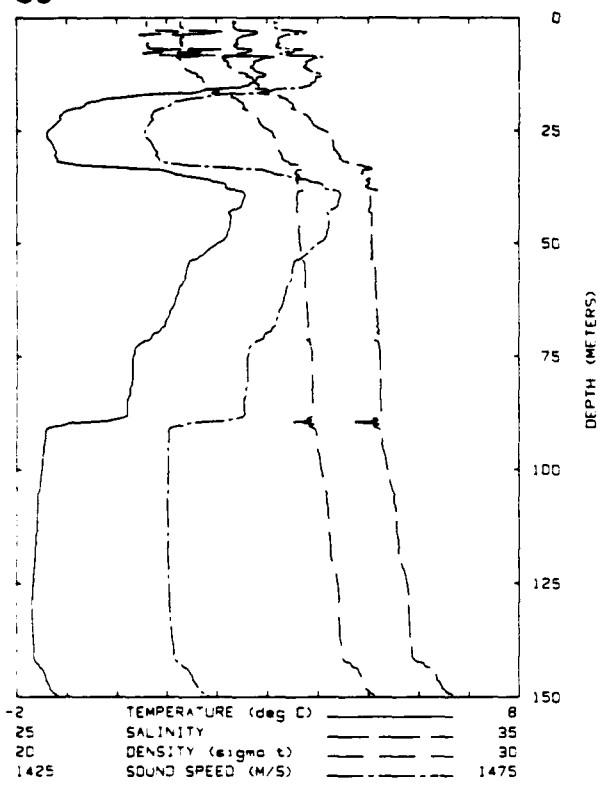


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec.)
1.8	1.8	1.87	23.601	28.408	21.149	1445.3
1.7	1.7	1.98	24.447	27.184	21.737	1447.7
5.8	5.8	1.95	24.721	27.538	22.035	1448.1
11.2	11.1	3.42	27.403	28.445	23.451	1457.1
16.4	16.4	4.76	28.225	30.345	24.041	1484.0
21.7	21.8	3.84	27.884	28.810	23.802	1458.8
27.3	27.2	0.05	25.703	30.541	24.535	1443.8
32.0	32.7	-0.64	25.440	30.887	24.837	1441.1
38.3	38.1	-1.15	25.324	31.251	25.145	1439.3
45.6	45.8	-1.48	25.320	31.583	25.422	1438.3
52.3	52.0	-0.85	25.904	31.709	25.507	1441.5
58.9	58.5	-1.33	25.859	31.880	25.650	1439.6
65.4	65.0	-1.43	25.691	32.029	25.781	1439.4
71.8	71.5	-0.51	26.585	32.224	25.911	1444.1
77.5	77.0	-0.06	27.048	32.404	26.041	1446.5
83.0	82.5	-0.28	27.060	32.631	26.230	1445.9
88.8	88.2	-1.10	26.527	32.804	26.400	1442.4
95.0	94.4	-1.50	26.398	33.058	26.616	1441.0
100.6	99.9	-1.37	26.706	33.333	26.835	1442.1
106.8	106.1	-1.24	26.822	33.404	26.854	1443.0
112.3	111.5	-1.04	27.300	33.771	27.179	1444.4
117.6	116.8	-0.88	27.084	34.184	27.483	1446.7
122.9	122.1	-0.28	28.482	34.483	27.724	1449.0
128.1	127.3	-0.13	28.880	34.807	27.816	1450.0
133.2	132.3	-0.07	28.747	34.812	27.817	1450.4
138.4	137.4	-0.03	28.811	34.844	27.841	1450.7
143.5	142.5	0.15	28.045	34.757	27.922	1451.7
148.6	147.6	0.17	29.070	34.783	27.926	1451.8
153.5	152.4	0.16	29.088	34.759	27.924	1451.8

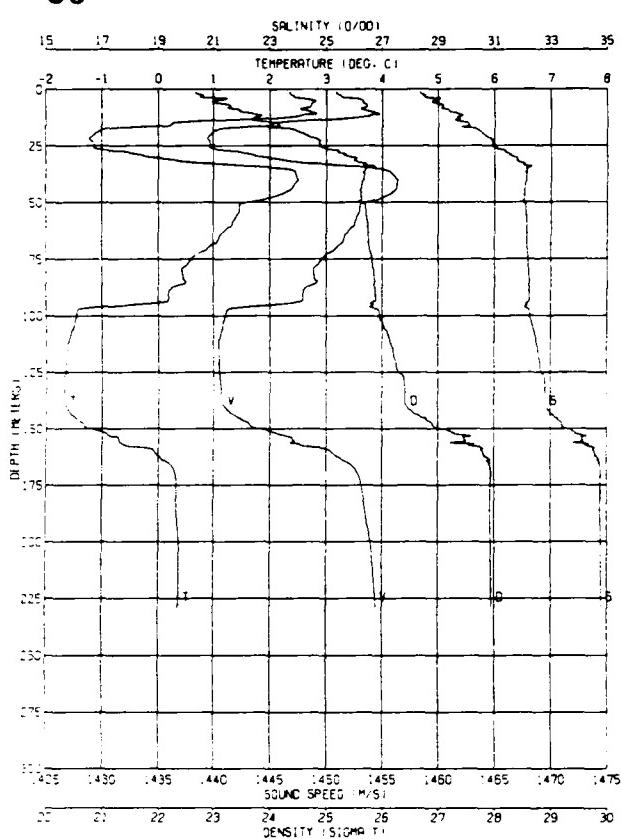
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.4	2.32	1450.2	22.45	28.08
10.4	2.68	1452.9	22.92	28.69
15.1	4.11	1460.0	23.74	29.85
20.3	4.31	1461.5	24.06	30.28
25.5	1.77	1452.7	24.39	30.49
30.2	.84	1448.5	24.64	30.72
35.0	-.13	1444.7	24.72	30.78
40.2	-.24	1444.2	25.11	31.25
45.4	-.99	1442.4	25.26	31.41
50.0	-1.46	1439.3	25.40	31.55
55.2	-.26	1444.5	25.65	31.85
60.3	-.39	1444.2	25.60	31.84
65.1	-1.10	1441.4	25.73	31.97
70.0	-.01	1446.2	25.86	32.18
75.0	-.05	1446.4	25.95	32.30
80.1	-.22	1446.0	26.05	32.41
85.0	-.34	1445.8	26.15	32.53
90.3	-.56	1445.0	26.23	32.62
95.2	-1.05	1443.3	26.38	32.78
100.1	-1.30	1442.3	26.65	33.11
110.3	-1.03	1444.5	27.14	33.72
120.1	-.40	1448.3	27.64	34.37
130.0	-.05	1450.5	27.85	34.65
140.1	.08	1451.4	27.87	34.68
150.1	.11	1451.8	27.87	34.69
160.2	.17	1452.3	27.89	34.72
170.2	.24	1452.8	27.91	34.74
180.3	.30	1453.3	27.92	34.77
190.0	.39	1453.9	27.94	34.80
200.1	.40	1454.1	27.95	34.80
210.1	.40	1454.3	27.95	34.81
220.1	.40	1454.5	27.95	34.81
230.3	.41	1454.7	27.96	34.82
240.1	.41	1454.9	27.96	34.83
250.4	.40	1455.0	27.97	34.83
251.3	.40	1455.1	27.97	34.84

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
89	X		246	1400	Ship	71 45.4	155 4.9
90		X					

89



90



PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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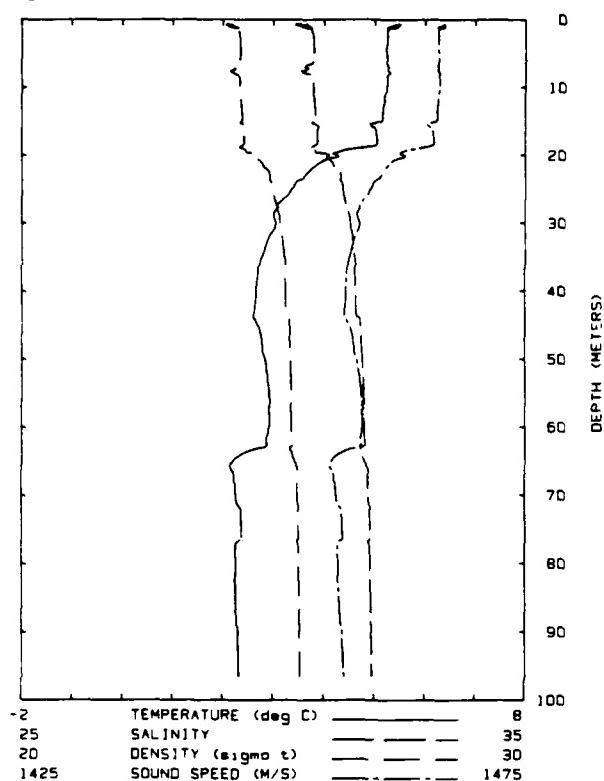
1.1	1.1	2.33	25.803	28.277	22.603	1450.7
4.9	4.9	2.39	25.855	28.281	22.602	1451.0
10.1	10.1	2.74	25.884	28.207	23.315	1453.9
15.3	15.2	2.51	27.032	28.842	23.837	1453.7
20.5	20.4	-0.93	24.865	30.553	24.576	1438.1
26.4	28.2	-1.39	29.107	31.218	29.125	1437.9
32.9	32.7	-0.73	28.068	31.841	29.810	1442.0
38.3	38.1	2.26	28.878	32.086	25.644	1455.0
43.5	43.2	2.23	28.821	32.044	25.813	1455.8
48.8	48.5	2.20	28.811	32.058	25.627	1455.8
54.0	53.7	1.50	28.059	32.074	25.688	1452.8
59.1	58.8	1.32	27.864	32.145	25.756	1452.2
64.5	64.1	1.11	27.821	32.188	25.787	1451.4
69.8	69.3	0.85	27.844	32.210	25.836	1450.3
75.1	74.7	0.34	27.245	32.227	25.877	1448.1
80.5	80.0	0.30	27.228	32.241	25.890	1448.0
85.8	85.2	0.20	27.180	32.255	25.806	1447.7
91.0	80.5	-1.24	25.803	32.103	25.836	1440.8
96.4	85.8	-1.46	25.876	32.306	26.006	1440.1
101.8	101.0	-1.52	25.813	32.406	26.088	1440.1
106.2	106.2	-1.57	25.951	32.520	26.162	1440.1
112.1	111.4	-1.59	25.970	32.562	26.217	1440.1
117.3	118.5	-1.62	25.877	32.602	26.250	1440.1
122.6	121.7	-1.65	26.027	32.700	26.330	1440.2
127.7	126.8	-1.68	26.073	32.784	26.407	1440.3
132.8	131.8	-1.68	26.093	32.815	26.424	1440.4
138.0	137.1	-1.67	26.124	32.841	26.445	1440.6
143.1	142.1	-1.62	26.258	32.977	26.553	1441.0
148.1	147.1	-1.37	26.808	33.444	26.925	1443.0
151.7	150.8	-1.12	27.231	33.748	27.184	1444.6

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
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5.4	2.82	1453.3	22.99	28.80
10.3	2.75	1454.1	23.54	29.48
15.1	.24	1445.2	24.14	30.07
20.4	-1.15	1439.7	24.68	30.68
25.4	-1.13	1439.6	24.88	30.93
30.1	-.14	1444.4	25.43	31.64
35.0	2.20	1454.3	25.68	32.10
40.2	2.51	1456.4	25.66	32.10
45.1	2.31	1456.0	25.62	32.05
50.3	1.51	1453.2	25.65	32.03
55.3	1.42	1452.8	25.71	32.09
60.1	1.32	1452.5	25.74	32.12
65.2	1.11	1451.6	25.76	32.13
70.0	.91	1450.9	25.77	32.14
75.0	.59	1449.6	25.82	32.17
80.2	.43	1448.9	25.85	32.20
85.1	.49	1449.2	25.86	32.21
90.2	.19	1448.0	25.88	32.22
95.2	-.52	1445.1	25.83	32.13
100.6	-1.46	1441.0	25.95	32.24
110.3	-1.59	1440.5	26.13	32.45
120.3	-1.63	1440.5	26.25	32.60
130.0	-1.68	1440.6	26.40	32.78
140.2	-1.65	1440.9	26.45	32.85
150.1	-1.22	1443.9	27.04	33.59
160.2	-.08	1450.4	27.81	34.60
170.2	.30	1452.9	27.95	34.80
180.2	.32	1453.3	27.93	34.78
190.0	.33	1453.6	27.92	34.77
200.2	.36	1454.0	27.94	34.79
210.3	.37	1454.2	27.95	34.80
220.1	.36	1454.3	27.95	34.80
229.2	.36	1454.4	27.94	34.80

Station Number ASL Cast APL Cast Julian Day GMT hhmm Platform Latitude Longitude  
 91 X X 246 1502 Ship 71 41.8 155 3.8  
 92

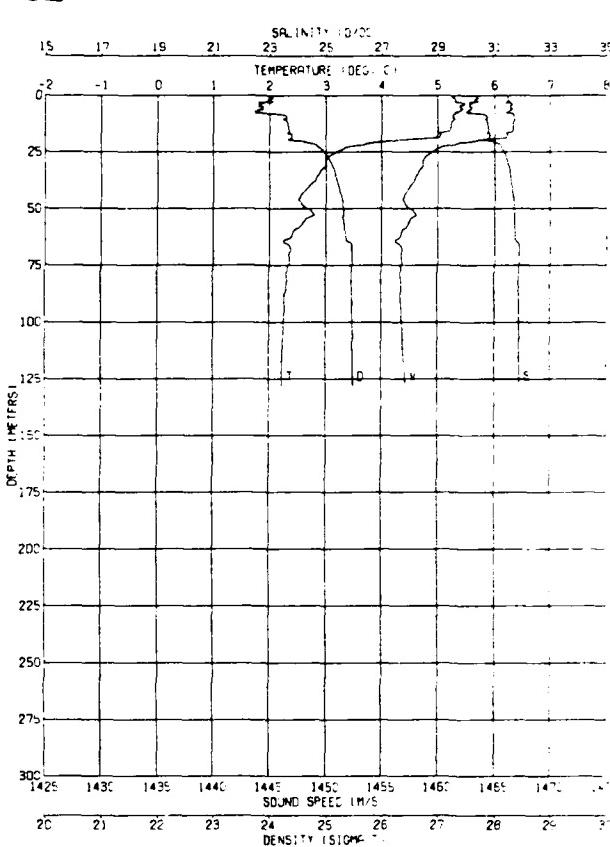
91



PRESSURE (dbar) DEPTH (m) TEMPERATURE (deg C) CONDUCTIVITY (mS/cm) SALINITY DENSITY SOUND VELOCITY (M/sec)

1.2	1.2	5.35	30.007	30.702	24.280	1466.6
2.8	2.8	5.23	29.878	30.780	24.335	1466.3
8.0	7.9	5.31	28.812	30.630	24.208	1466.5
13.2	13.1	5.16	28.857	30.622	24.376	1466.2
18.2	18.1	5.05	28.817	30.669	24.424	1465.9
23.4	23.2	5.00	28.137	31.331	24.933	1460.5
28.5	28.3	5.02	28.787	31.472	25.085	1458.3
33.6	33.5	2.84	28.722	31.560	25.187	1457.7
38.8	38.7	2.68	28.620	31.624	25.244	1457.2
44.0	43.7	2.60	28.594	31.645	25.287	1458.9
49.2	48.9	2.79	28.631	31.739	25.327	1459.0
54.2	53.8	2.80	28.656	31.772	25.348	1459.8
59.3	59.0	2.93	28.697	31.797	25.381	1459.8
64.3	63.8	2.39	28.514	31.743	25.361	1456.5
69.4	69.0	2.26	28.523	31.882	25.482	1456.2
74.3	73.9	2.30	28.646	31.915	25.500	1456.8
79.3	78.8	2.25	28.560	31.927	25.518	1456.4
84.1	83.8	2.26	28.570	31.930	25.520	1456.5
89.1	88.6	2.28	28.607	31.948	25.533	1456.7
94.0	93.4	2.32	28.640	31.949	25.531	1456.9
97.0	96.4	2.33	28.643	31.943	25.525	1457.0

92

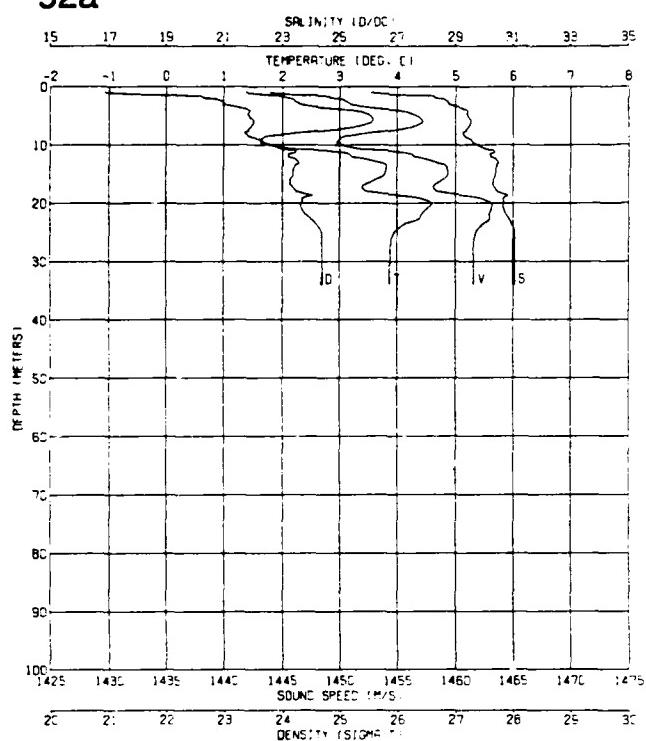


DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.4	5.40	1466.4	23.86	30.18
10.4	5.32	1466.8	24.25	30.66
15.0	5.22	1466.6	24.34	30.77
20.3	4.21	1463.4	24.63	31.03
25.2	3.16	1459.5	24.98	31.34
30.2	3.00	1458.7	25.10	31.48
35.1	2.86	1458.1	25.17	31.55
40.1	2.69	1457.5	25.24	31.61
45.1	2.54	1457.0	25.28	31.66
50.4	2.71	1457.7	25.33	31.73
55.2	2.63	1457.5	25.32	31.71
60.2	2.42	1456.8	25.35	31.73
65.2	2.30	1456.4	25.46	31.85
70.2	2.35	1456.7	25.47	31.87
75.0	2.35	1456.8	25.46	31.86
80.1	2.32	1456.8	25.47	31.87
85.3	2.31	1456.8	25.47	31.87
90.3	2.27	1456.7	25.48	31.88
95.3	2.28	1456.8	25.47	31.87
100.4	2.26	1456.8	25.48	31.88
110.1	2.25	1457.0	25.49	31.88
120.1	2.23	1457.1	25.49	31.89
128.4	2.23	1457.2	25.50	31.90

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
92a		X	246	1640	Ship	71 33.7	154 49.3

92a

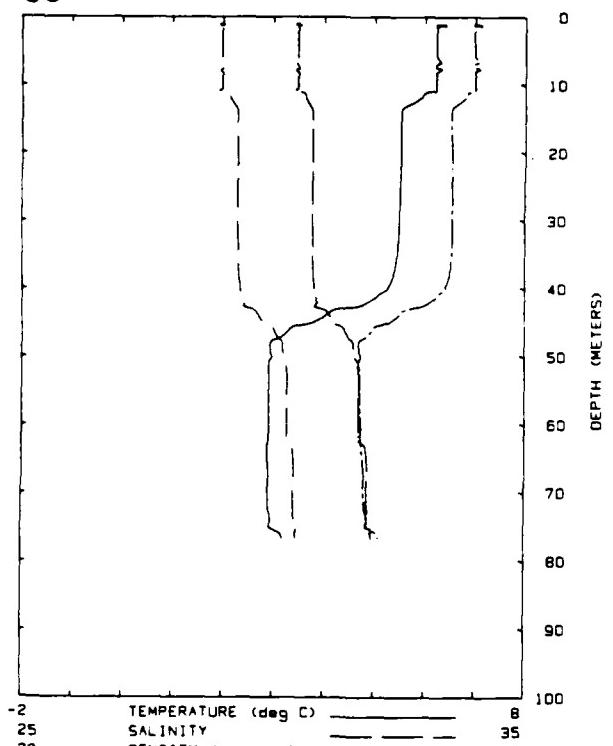


DEPTH (M)    T (C)    V (M/S)    DENSITY S (0/00)

DEPTH (M)	T (C)	V (M/S)	DENSITY S (0/00)
5.1	3.54	1456.8	23.45
10.3	1.89	1450.7	23.89
15.3	3.77	1459.4	24.19
20.4	4.58	1463.2	24.32
25.2	3.93	1461.7	24.69
30.5	3.88	1461.6	24.70
32.7	3.86	1461.6	24.69

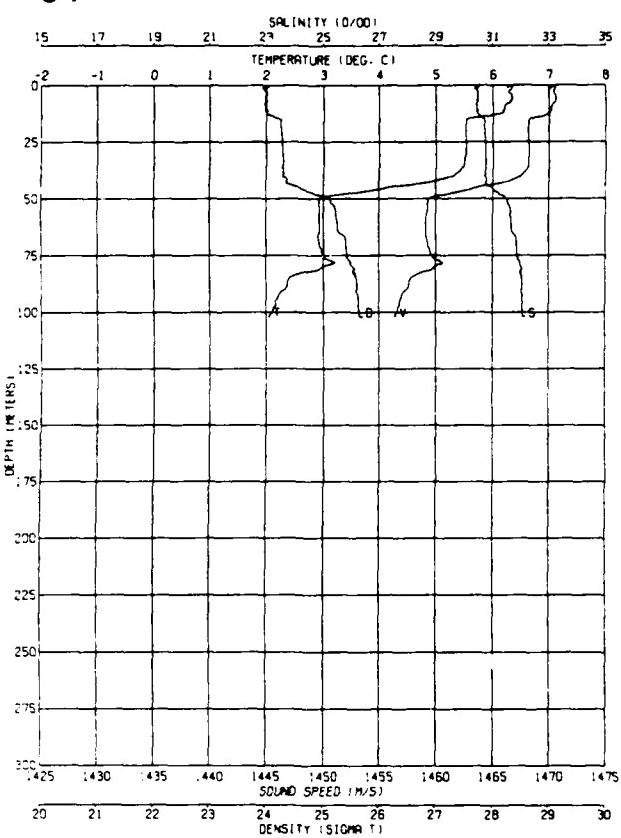
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
93	X		247	0048	Ship	71 25.3	156 47.0
94		X					

93



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.3	1.3	8.22	30.515	30.483	23.988	1488.0
5.0	5.0	8.22	30.508	30.475	23.981	1489.8
11.0	10.0	8.22	30.443	30.388	23.920	1489.0
16.5	18.4	5.52	30.205	30.770	24.295	1467.6
22.0	22.5	5.52	30.211	30.772	24.287	1467.7
28.0	28.1	5.50	30.207	30.778	24.303	1467.8
33.4	33.2	5.48	30.191	30.761	24.308	1467.8
38.5	39.2	5.32	30.084	30.804	24.344	1467.2
44.6	44.6	3.92	28.247	31.147	24.758	1462.0
50.1	49.8	2.87	28.875	31.818	25.217	1458.6
55.2	54.9	2.82	28.908	31.899	25.284	1458.6
60.4	60.1	2.82	28.808	31.687	25.283	1458.7
65.7	65.3	2.80	28.025	31.658	25.413	1458.9
71.0	70.6	2.82	28.054	31.868	25.419	1459.1
76.0	75.6	3.05	28.228	31.846	25.470	1459.8

94

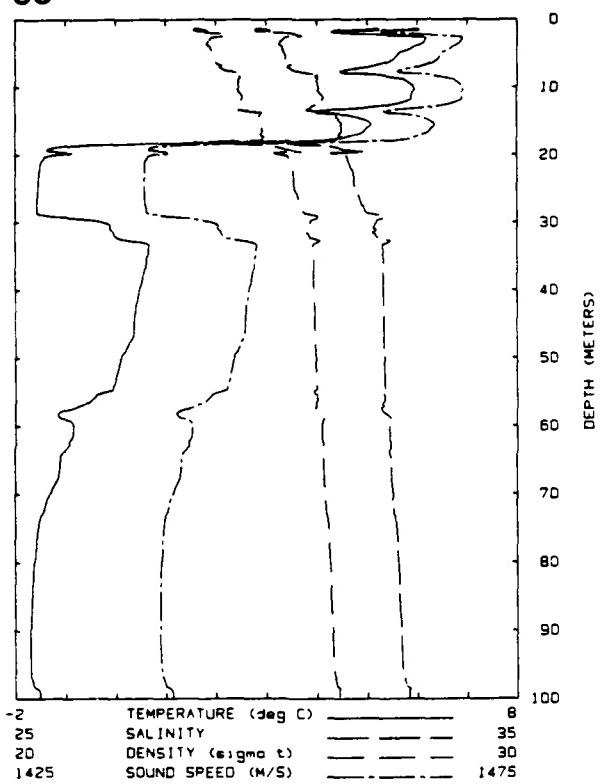


DEPTH (M) T (C) V (M/S) DENSITY S (PPT)

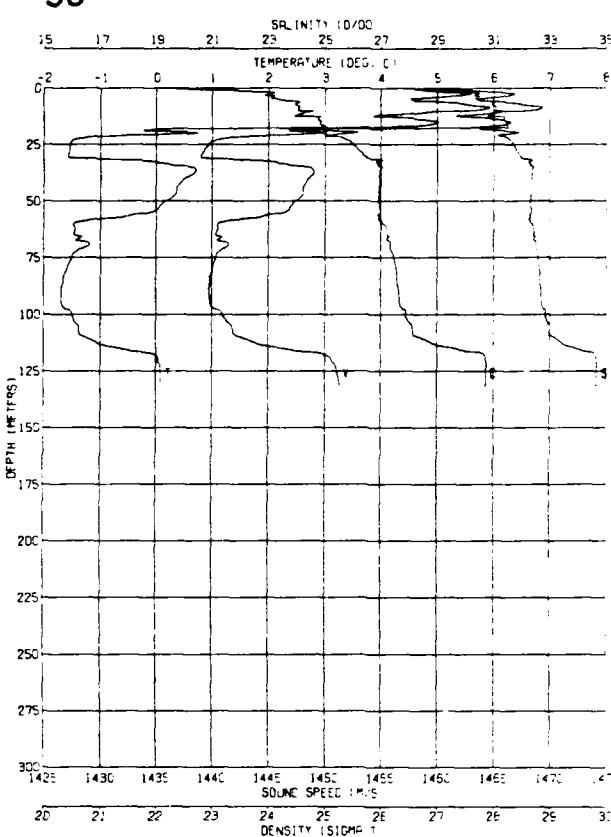
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (PPT)
5.5	6.34	1470.6	24.01	30.49
10.3	6.20	1470.2	23.99	30.45
15.1	5.53	1468.2	24.25	30.71
20.4	5.54	1468.1	24.27	30.73
25.1	5.54	1468.2	24.28	30.74
30.1	5.53	1468.2	24.29	30.75
36.1	5.49	1468.1	24.29	30.73
40.2	5.30	1467.5	24.28	30.71
45.0	4.17	1463.7	24.59	30.97
50.4	2.91	1459.3	25.12	31.51
55.3	2.93	1459.2	25.22	31.62
60.1	2.93	1459.1	25.25	31.66
65.1	2.92	1459.1	25.29	31.71
70.3	2.92	1459.3	25.39	31.83
75.0	3.00	1459.6	25.41	31.86
80.2	2.95	1459.8	25.55	32.03
85.1	2.40	1457.8	25.60	32.04
90.4	2.30	1457.3	25.57	32.00
95.3	2.17	1456.8	25.63	32.06
100.1	2.10	1456.6	25.64	32.07
102.2	2.06	1456.4	25.68	32.11

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 95 X 247 0202 Ship 71 31.8 156 55.2  
 96 X

95



96



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
 (dBar) (M) (deg C) (mS/cm) (‰) (kg/m³) (m/sec)

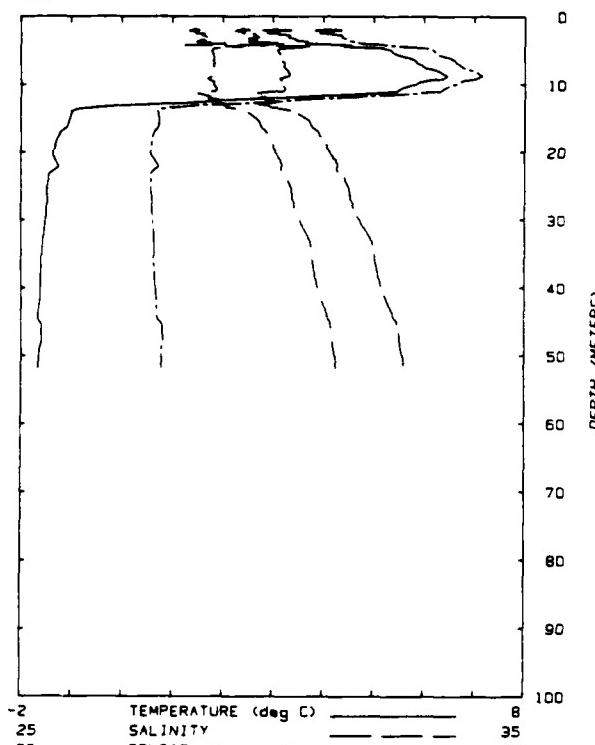
1.7	1.7	5.21	29.199	29.820	23.658	1465.1
3.8	3.8	6.06	30.173	30.252	23.626	1469.0
8.8	8.7	5.57	30.476	31.024	24.489	1468.1
13.7	13.6	4.00	29.173	30.888	24.633	1451.6
18.7	18.6	-0.58	25.553	30.867	24.918	1441.3
23.6	23.7	-1.53	25.374	31.731	25.543	1437.8
28.5	28.1	-1.27	28.025	32.323	28.024	1440.0
34.5	34.3	0.65	27.548	32.316	25.033	1449.0
39.7	39.5	0.50	27.419	32.305	25.032	1448.4
44.9	44.7	0.37	27.332	32.326	25.955	1447.9
50.1	49.8	0.10	27.130	32.339	25.979	1446.8
55.3	54.9	-0.16	26.872	32.268	25.933	1445.6
60.8	60.2	-0.85	26.440	32.429	26.089	1442.6
66.1	65.7	-1.11	26.288	32.478	26.136	1441.5
71.7	71.3	-1.39	26.081	32.516	26.174	1440.4
76.7	76.3	-1.57	25.994	32.596	26.244	1439.7
81.9	81.4	-1.64	25.985	32.631	26.274	1439.5
86.8	86.3	-1.87	25.983	32.654	26.293	1439.5
91.9	91.3	-1.70	25.988	32.687	26.320	1439.5
97.0	96.3	-1.68	26.004	32.721	26.348	1439.6
101.9	101.2	-1.50	26.243	32.843	26.442	1440.8

DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

5.2	4.49	1463.5	24.27	30.60
10.1	5.40	1467.8	24.60	31.11
15.3	5.05	1466.7	24.90	31.45
20.4	.62	1449.6	25.02	31.21
25.1	-1.53	1440.3	25.37	31.53
30.1	-1.57	1439.6	25.56	31.76
35.0	.61	1448.7	25.98	32.37
40.2	.51	1448.6	25.95	32.33
45.1	.37	1448.1	25.97	32.34
50.2	.19	1447.4	25.94	32.30
55.3	-.12	1446.2	25.95	32.29
60.3	-1.49	1440.6	26.04	32.35
65.1	-1.45	1440.5	26.08	32.40
70.0	-1.22	1441.5	26.14	32.48
75.1	-1.50	1440.4	26.22	32.56
80.3	-1.60	1440.1	26.25	32.61
85.1	-1.65	1439.9	26.28	32.64
90.4	-1.69	1439.8	26.31	32.68
96.0	-1.68	1439.9	26.34	32.71
100.1	-1.55	1440.9	26.44	32.54
110.1	-1.25	1442.7	26.74	33.21
120.0	.04	1450.5	27.88	34.69
130.3	.09	1451.2	27.89	34.71
131.5	.09	1451.3	27.86	34.67

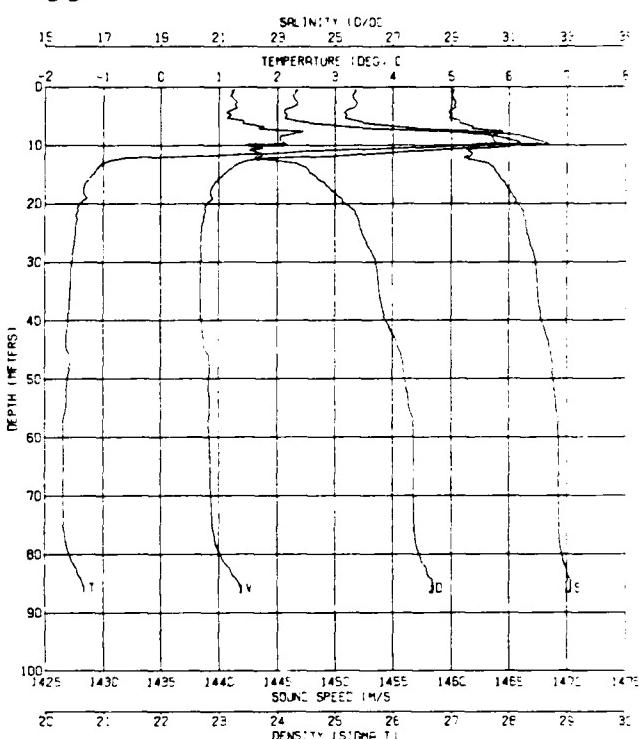
Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 97 X 247 0258 Ship 71 34.4 156 58.4  
 99 X

97



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
2.1	2.1	3.05	27.034	28.353	23.408	1455.2
4.1	4.1	3.83	28.225	30.230	24.057	1458.9
8.5	8.5	6.05	30.088	30.181	23.755	1468.9
15.0	14.9	-1.02	24.838	30.810	24.824	1438.7
19.0	19.7	-1.35	25.047	31.083	25.022	1437.8
25.0	25.6	-1.49	25.252	31.515	25.367	1437.8
32.2	32.0	-1.55	25.474	31.878	25.662	1438.1
38.5	38.2	-1.81	25.883	32.094	25.838	1438.2
44.4	44.2	-1.86	25.785	32.394	26.082	1438.5
50.0	48.8	-1.85	25.085	32.561	26.217	1438.8

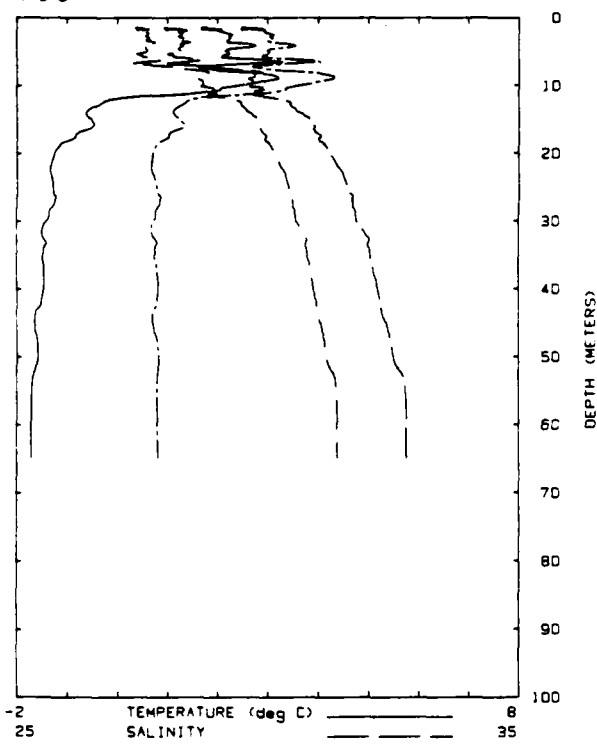
99



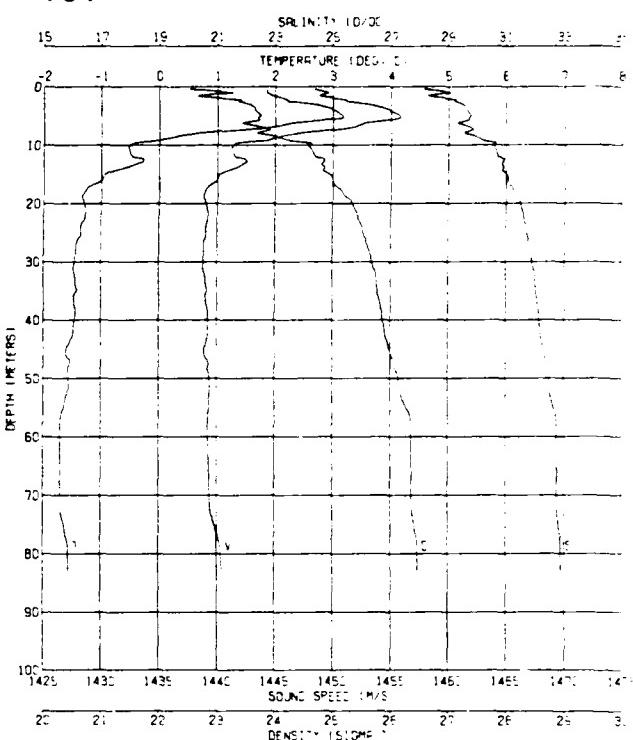
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (1/000)
5.2	2.14	1450.9	23.14	28.93
10.4	4.69	1464.0	23.75	29.98
15.3	-1.21	1440.3	24.67	30.68
20.1	-1.42	1438.9	25.20	31.31
25.2	-1.49	1438.5	25.48	31.65
30.2	-1.54	1438.5	25.71	31.94
35.3	-1.58	1438.4	25.77	32.01
40.2	-1.61	1438.6	25.90	32.17
45.0	-1.64	1438.8	26.11	32.43
50.6	-1.63	1439.2	26.22	32.57
55.1	-1.66	1439.2	26.27	32.63
60.2	-1.70	1439.2	26.35	32.72
65.2	-1.71	1439.3	26.35	32.72
70.2	-1.71	1439.3	26.35	32.72
75.1	-1.70	1439.5	26.35	32.73
80.2	-1.59	1440.2	26.44	32.84
85.4	-1.34	1441.6	26.69	33.15
85.4	-1.33	1441.9	26.66	33.12

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
100	X		247	0344	Ship	71 37.7	157 3.3
101		X					

100



101

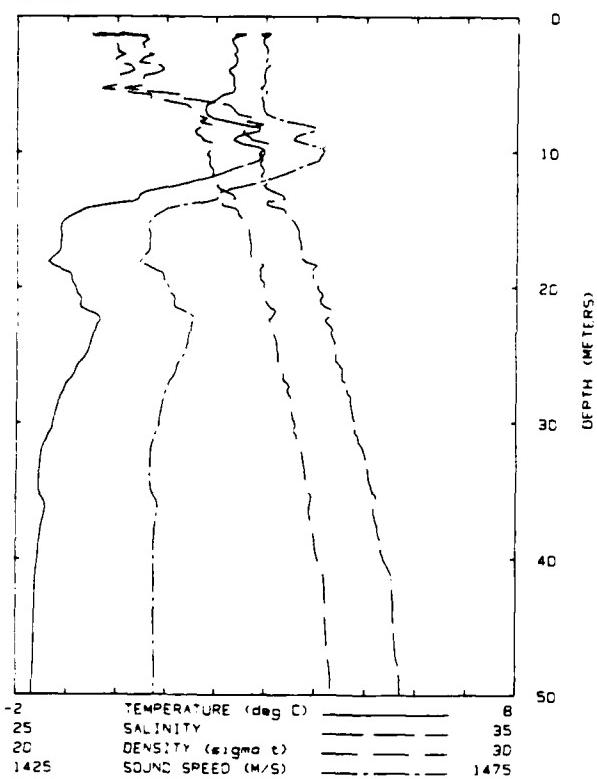


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.0	1.0	1.84	25.085	28.078	22.474	1448.3
6.1	8.1	2.36	25.750	28.423	22.717	1451.1
11.3	11.2	1.54	26.385	29.865	23.899	1449.5
16.4	16.3	-0.52	25.554	30.826	24.865	1441.4
21.6	21.7	-1.32	25.284	31.360	25.238	1438.3
26.1	28.0	-1.30	25.518	31.678	25.495	1439.0
34.5	34.3	-1.47	25.835	32.020	25.775	1438.7
40.6	40.5	-1.49	25.757	32.187	25.919	1439.0
46.7	46.4	-1.63	25.784	32.400	26.085	1438.7
52.4	52.1	-1.64	25.855	32.625	26.269	1439.0
58.1	57.7	-1.71	25.992	32.758	26.378	1438.9
63.4	63.0	-1.71	25.986	32.761	26.380	1438.0

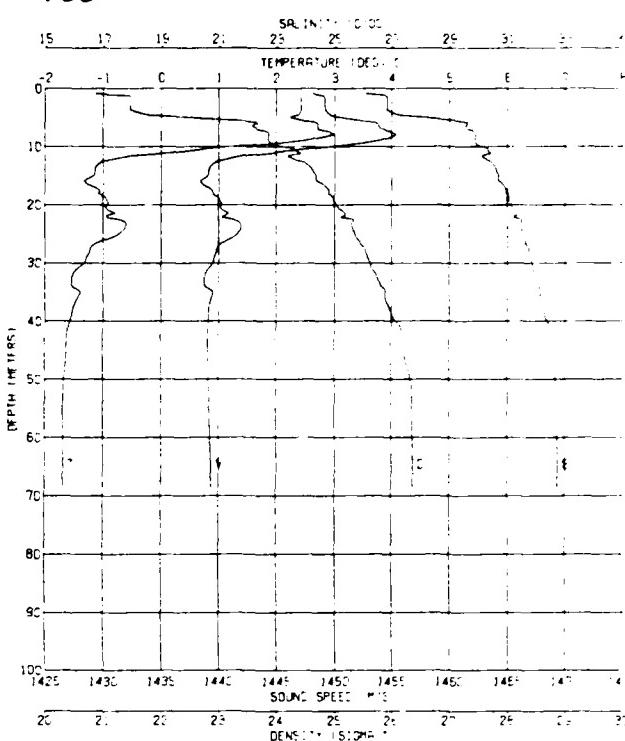
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.4	3.20	1455.8	23.71	29.72
10.4	-0.52	1441.5	24.55	30.54
15.1	-0.96	1440.3	24.93	30.99
20.3	-1.29	1439.2	25.30	31.44
25.2	-1.35	1439.2	25.49	31.67
30.3	-1.46	1439.0	25.66	31.87
35.3	-1.42	1439.2	25.74	31.97
40.2	-1.45	1439.3	25.85	32.11
45.4	-1.61	1438.9	25.98	32.27
50.0	-1.56	1439.4	26.14	32.46
55.1	-1.64	1439.3	26.26	32.62
60.1	-1.71	1439.3	26.36	32.73
65.3	-1.71	1439.3	26.36	32.74
70.0	-1.70	1439.4	26.37	32.74
75.1	-1.64	1439.8	26.41	32.80
80.1	-1.56	1440.4	26.48	32.88
83.0	-1.56	1440.4	26.48	32.88

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 102 X 247 0430 Ship 71 40.2 157 6.4  
 103 X

102



103

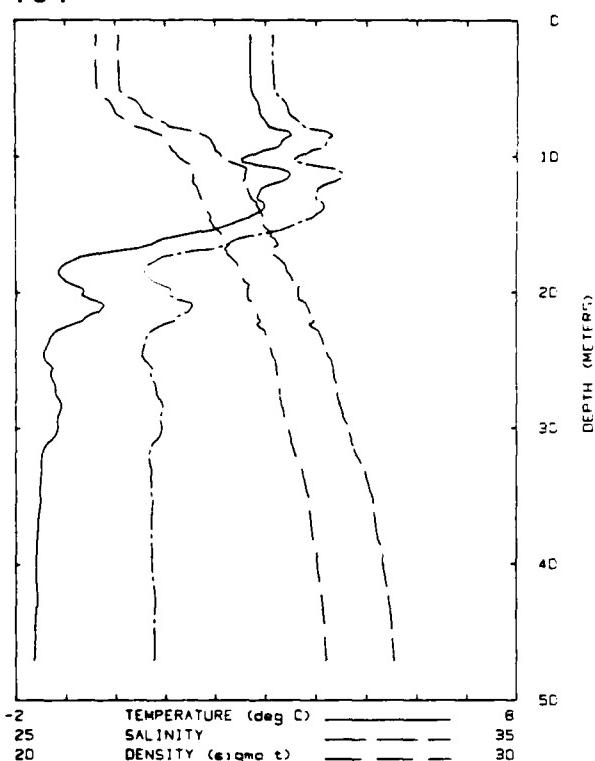


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
5.1	5.1	2.34	24.961	27.511	21.082	1448.8
10.3	10.2	2.87	27.404	28.863	23.820	1455.7
15.3	15.2	-1.09	24.868	30.582	24.604	1438.3
20.6	20.5	-0.80	25.491	31.124	25.033	1440.5
25.9	25.7	-0.78	25.787	31.478	25.319	1441.1
31.4	31.2	-1.40	25.573	31.058	25.843	1438.8
36.8	36.4	-1.42	25.783	32.185	25.891	1439.2
41.0	41.6	-1.82	25.800	32.538	26.199	1438.8
47.1	46.8	-1.85	25.936	32.617	26.263	1438.9
52.0	51.7	-1.70	25.993	32.745	26.387	1439.8

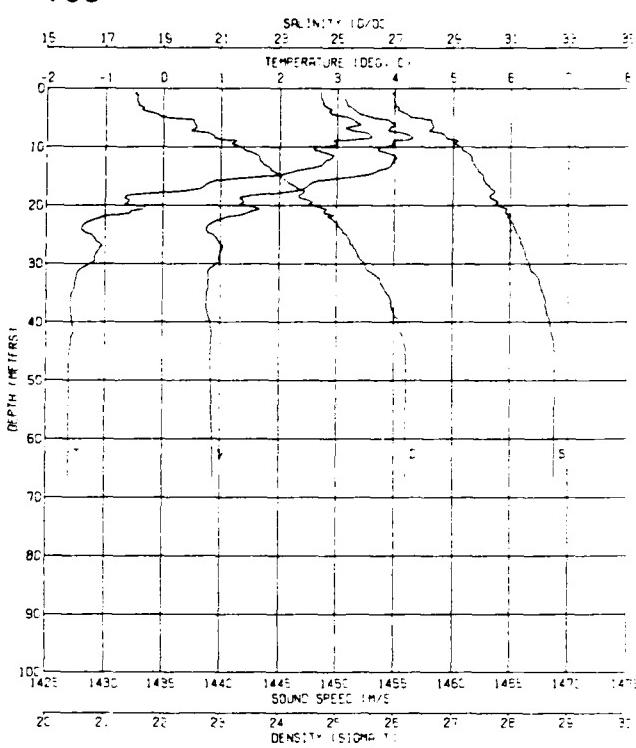
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (g/cc)
5.5	2.30	1452.0	23.42	29.30
10.1	1.01	1448.9	24.24	30.24
15.0	-1.16	1439.3	24.62	30.60
20.3	-0.93	1441.5	24.98	31.05
25.2	-0.73	1441.8	25.30	31.46
30.3	-1.34	1439.6	25.59	31.80
35.3	-1.38	1439.7	25.85	32.11
40.3	-1.58	1439.2	26.08	32.39
45.0	-1.63	1439.2	26.22	32.54
50.3	-1.68	1439.2	26.32	32.68
55.3	-1.69	1439.2	26.35	32.73
60.1	-1.70	1439.3	26.36	32.73
65.3	-1.70	1439.4	26.36	32.74
68.5	-1.70	1439.4	26.37	32.75

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 104 X 247 0512 Ship 71 43.1 157 8.0  
 105 X

104



105

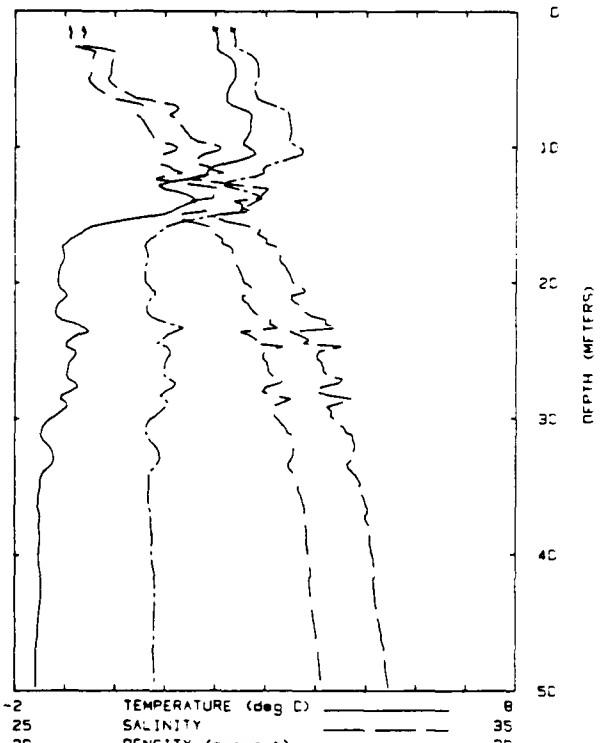


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (m/sec)
1.2	1.2	2.70	24.861	27.064	21.613	1456.7
1.2	1.2	2.70	24.859	27.063	21.613	1456.7
4.7	4.7	2.71	24.890	27.083	21.623	1456.9
9.6	9.6	2.97	26.896	28.018	23.146	1454.6
14.3	14.3	2.79	27.334	28.046	23.802	1455.1
19.3	19.2	-1.00	24.811	30.552	24.576	1438.7
24.6	24.4	-1.43	25.086	31.230	25.135	1437.7
30.4	30.3	-1.18	25.600	31.660	25.477	1439.6
36.1	35.9	-1.52	25.896	32.149	25.880	1438.7
41.2	41.0	-1.59	25.812	32.384	26.073	1438.8
46.9	46.7	-1.62	25.805	32.547	26.205	1438.9

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (O/OC)
5.4	3.29	1454.5	22.55	28.27
10.1	2.61	1453.7	23.38	29.27
15.1	1.65	1451.5	24.03	30.03
20.3	-1.30	1442.8	24.67	30.70
25.4	-1.21	1439.6	25.18	31.30
30.1	-1.26	1439.8	25.50	31.68
35.1	-1.58	1438.8	25.88	32.15
40.1	-1.56	1439.1	26.08	32.39
45.0	-1.61	1439.2	26.20	32.55
50.2	-1.62	1439.2	26.21	32.56
55.1	-1.62	1439.3	26.21	32.55
60.1	-1.62	1439.4	26.20	32.54
65.1	-1.62	1439.4	26.20	32.55
66.6	-1.62	1439.5	26.21	32.55

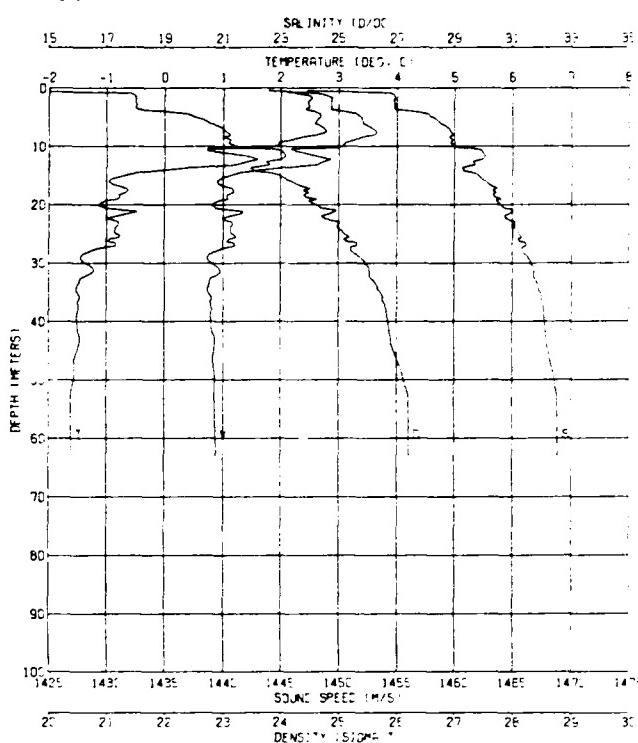
Station ASL APL Julian GMT  
 Number Cast Cast Day hmmm Platform Latitude Longitude  
 106 X 247 0554 Ship 71 45.9 157 12.4  
 107 X

106



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.3	1.3	2.02	23.816	26.373	21.104	1448.8
3.9	3.9	2.37	24.513	26.920	21.519	1449.1
8.9	8.9	2.69	25.966	28.396	22.673	1452.5
13.9	13.9	1.58	26.378	29.916	23.957	1445.7
18.9	18.9	-1.09	24.728	30.392	24.448	1438.1
24.5	24.5	-0.87	25.093	30.765	24.748	1439.2
30.9	30.7	-1.46	25.309	31.556	25.399	1438.1
37.1	38.0	-1.51	25.619	32.035	25.786	1438.6
43.3	43.0	-1.40	25.757	32.188	25.912	1439.1
49.2	48.9	-1.58	25.854	32.426	26.106	1439.0
53.6	53.3	-1.63	25.910	32.561	26.217	1439.0

107

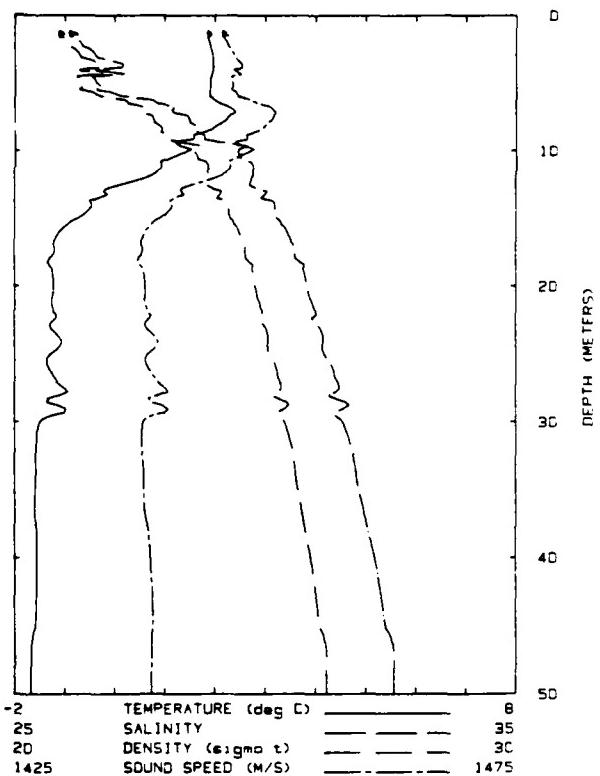


DEPTH (M) T (C) V (M/S) DENSITY S (‰)

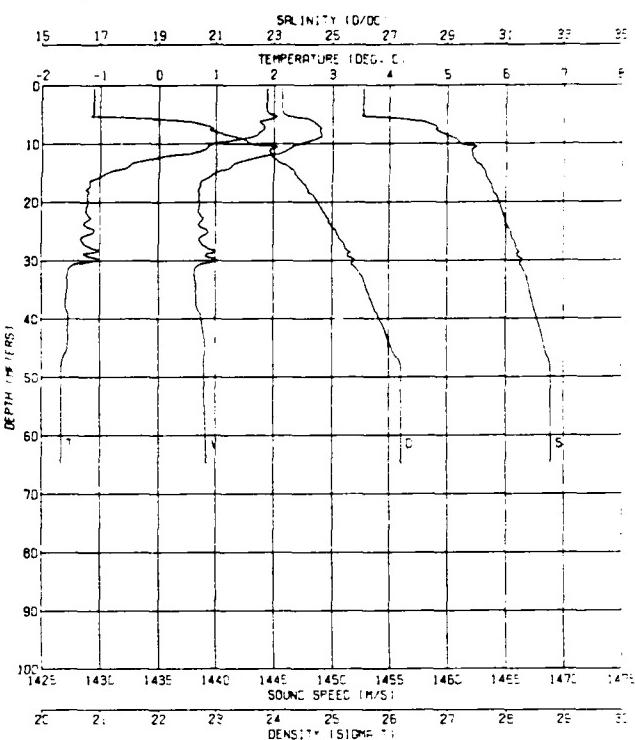
5.4	2.64	1452.1	22.66	28.36
10.3	1.73	1450.0	23.34	29.16
15.3	.80	1440.2	24.03	29.89
20.1	-1.13	1439.0	24.63	30.62
25.2	-.78	1441.0	25.14	31.25
30.2	-1.33	1439.2	25.48	31.66
35.1	-1.51	1438.8	25.74	31.97
40.1	-1.51	1439.0	25.87	32.13
45.3	-1.52	1439.2	25.95	32.24
50.0	-1.58	1439.3	26.12	32.44
55.1	-1.62	1439.3	26.20	32.54
60.1	-1.62	1439.3	26.20	32.54
63.0	-1.62	1439.4	26.22	32.56

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
108	X		247	0636	Ship	71 48.9	157 16.4
109		X					

108



109

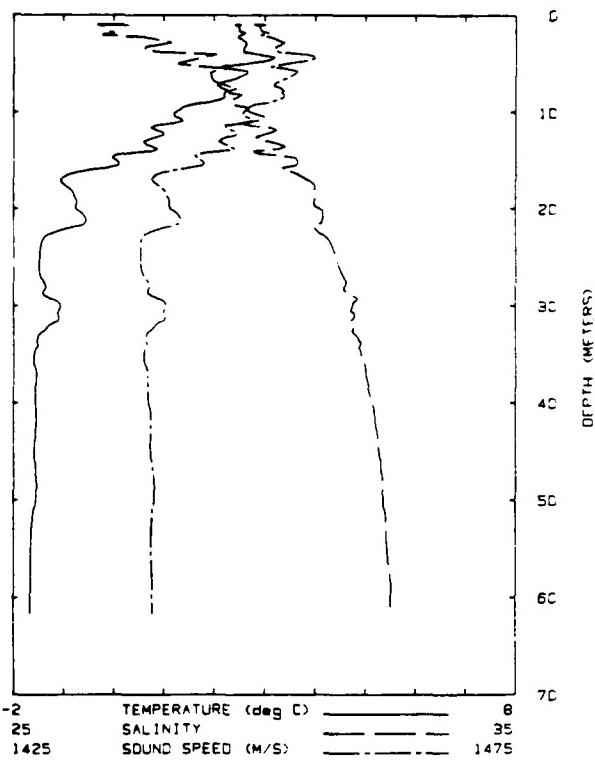


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
3.6	3.6	1.97	24.446	27.178	21.748	1447.7
8.7	8.6	1.81	25.527	26.648	22.931	1445.0
13.8	13.7	-0.49	25.009	30.166	24.252	1442.6
18.0	18.9	-1.23	24.801	30.774	24.762	1437.5
24.2	24.1	-1.05	25.317	31.149	25.060	1435.4
28.5	28.3	-1.00	25.526	31.373	25.240	1440.0
34.7	34.5	-1.59	25.418	31.842	25.833	1437.5
40.0	39.8	-1.55	25.687	32.175	25.802	1438.6
45.4	45.1	-1.59	25.832	32.408	26.092	1438.5
50.8	50.5	-1.68	25.884	32.572	26.227	1438.6

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (P/POE)
5.2	2.06	1446.2	26.85	26.05
10.3	-0.91	1446.9	23.78	29.65
15.0	-0.88	1440.0	24.35	32.28
20.4	-1.21	1438.6	24.79	32.81
25.2	-1.11	1439.3	25.08	31.16
30.3	-1.25	1439.6	25.34	31.49
35.1	-1.58	1438.3	25.61	31.81
40.1	-1.54	1438.8	25.84	32.09
45.0	-1.56	1439.1	26.05	32.35
50.2	-1.67	1439.0	26.21	32.55
55.1	-1.67	1439.1	26.21	32.55
60.3	-1.67	1439.1	26.21	32.55
64.8	-1.67	1439.2	26.22	32.57

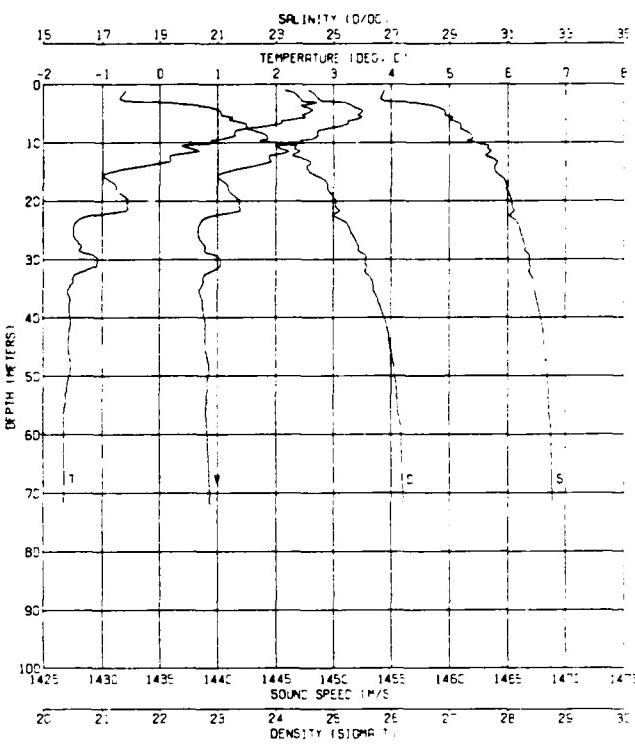
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
110	X		247	0727	Ship	71 54.7	157 22.6
111		X					

110



-2 TEMPERATURE (deg C) 8  
25 SALINITY 35  
1425 SOUND SPEED (M/S) 1475

111



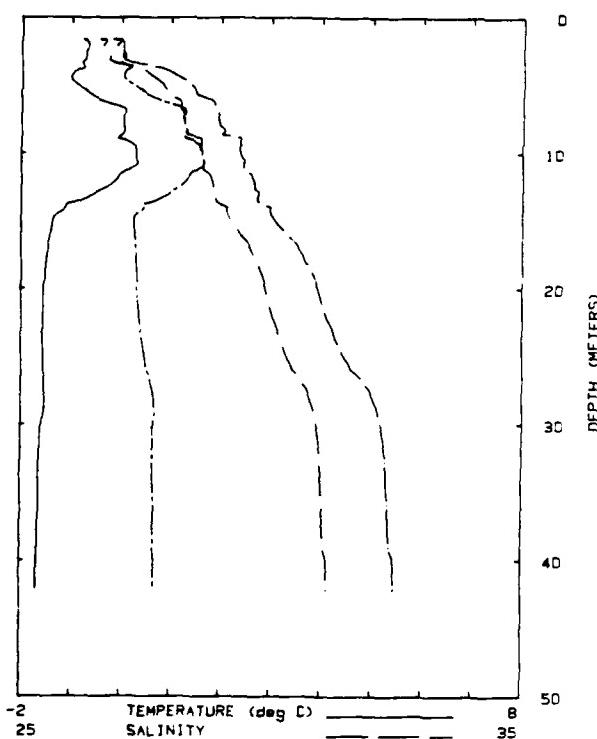
DEPTH (M) T (C) V (M/S) DENSITY S (‰)

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.2	2.53	1452.3	23.02	30.82
10.1	.84	1447.4	24.07	30.01
15.1	-.80	1440.9	24.50	30.47
20.3	-.54	1442.1	25.00	31.09
25.4	-1.49	1438.5	25.26	31.39
30.1	-1.06	1440.4	25.51	31.70
35.1	-1.57	1438.6	25.65	31.87
40.1	-1.54	1439.0	25.87	32.14
45.1	-1.58	1439.0	25.97	32.25
50.2	-1.56	1439.3	26.04	32.35
55.1	-1.63	1439.1	26.10	32.42
60.2	-1.66	1439.2	26.17	32.50
65.2	-1.65	1439.2	26.18	32.51
70.3	-1.65	1439.3	26.20	32.54
72.1	-1.66	1439.4	26.21	32.55

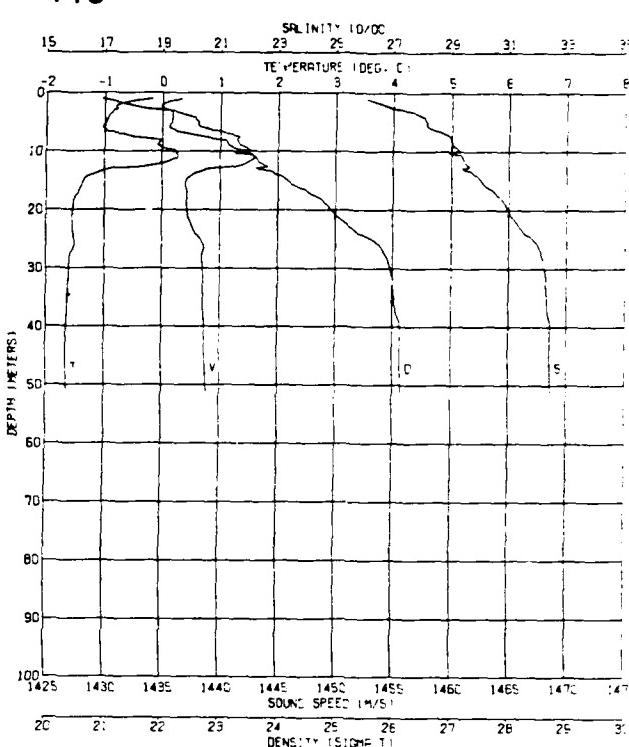
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.1	2.1	2.53	24.502	26.775	21.394	1449.6
7.3	7.3	2.08	26.213	26.246	23.393	1450.9
12.5	12.4	1.01	25.972	26.054	24.019	1447.1
17.6	17.5	-0.89	25.247	30.088	24.829	1439.4
22.8	22.7	-1.32	25.129	31.168	25.082	1436.1
28.1	28.0	-1.35	25.435	31.614	25.444	1438.7
33.3	33.4	-1.52	25.400	31.887	25.852	1438.3
38.5	38.6	-1.56	25.814	32.078	25.824	1438.5
44.2	43.9	-1.57	25.733	32.256	25.989	1438.7
49.7	49.4	-1.55	25.833	32.365	26.056	1439.1
55.1	54.8	-1.66	25.805	32.439	26.118	1438.7
60.6	60.3	-1.66	25.861	32.522	26.106	1438.9

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 112 X 247 1034 Ship 71 36.2 159 9.9  
 113 X

112



113

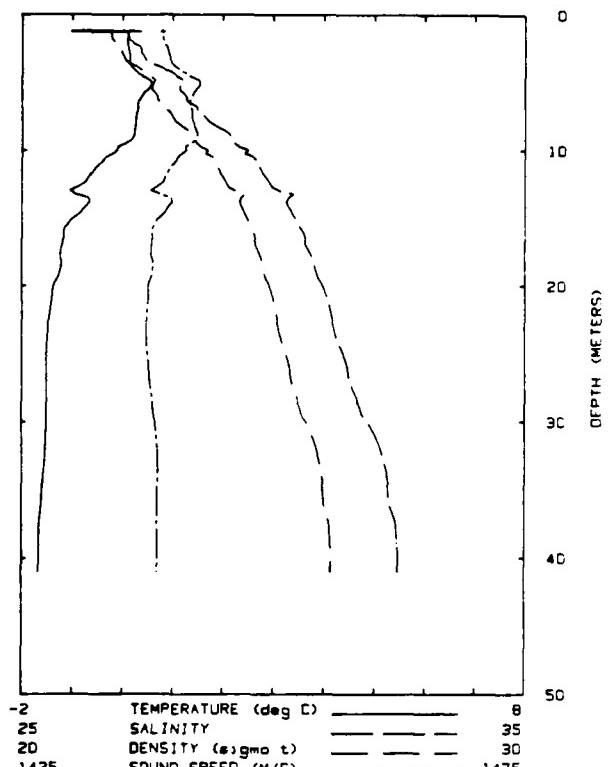


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
2.5	2.5	-0.69	22.486	27.037	21.735	1435.2
7.6	7.5	0.06	24.489	29.858	23.282	1441.4
12.5	12.4	-0.21	24.835	29.668	23.842	1441.2
17.7	17.6	-1.48	24.621	30.649	24.665	1436.6
23.2	23.0	-1.57	24.970	31.217	25.127	1437.0
29.3	29.1	-1.94	25.056	32.125	25.862	1438.5
35.4	35.2	-1.83	25.730	32.324	26.025	1438.4
41.2	41.0	-1.67	25.802	32.461	26.136	1438.5
42.4	42.1	-1.67	25.802	32.450	26.136	1438.5

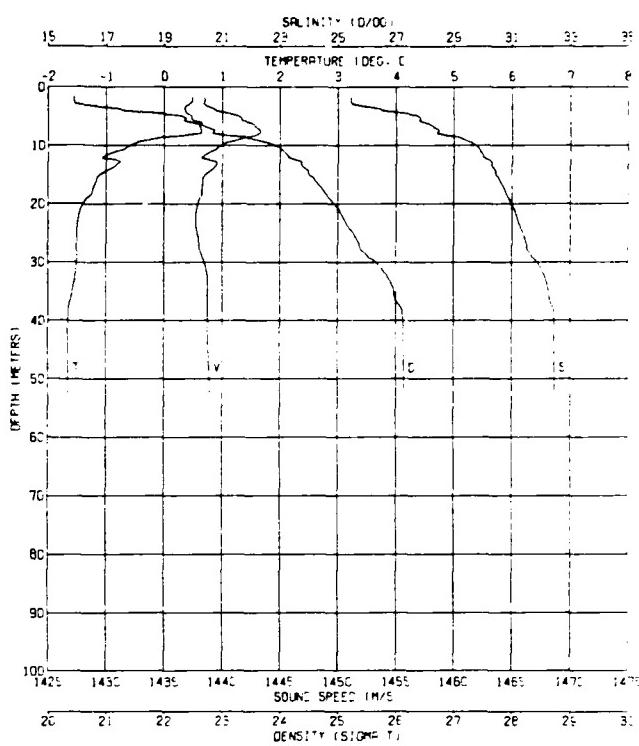
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.1	-0.97	1435.9	22.62	38.12
10.3	-0.26	1442.2	23.26	28.95
15.0	-1.38	1437.1	24.16	30.03
20.3	-1.55	1437.3	24.91	30.95
25.2	-1.54	1438.5	25.64	31.85
30.2	-1.62	1438.6	25.94	32.21
35.4	-1.63	1438.7	26.01	32.31
40.2	-1.67	1438.7	26.11	32.43
45.0	-1.67	1438.8	26.12	32.44
50.0	-1.67	1438.8	26.12	32.44
51.2	-1.67	1438.9	26.13	32.45

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 114 X 247 1135 Ship 71 30.5 159 3.1  
 115 X

114



115

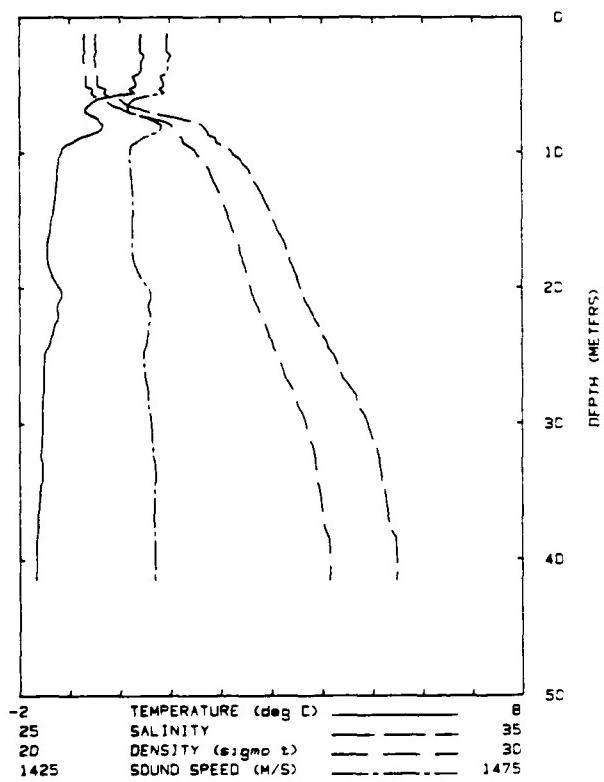


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.3	1.3	0.11	23.003	26.893	21.681	1438.9
1.3	1.3	0.11	23.052	27.062	21.737	1435.0
6.1	6.1	0.38	24.191	28.275	22.702	1442.0
11.4	11.3	-0.53	24.862	29.746	23.914	1435.6
17.1	17.0	-1.19	24.839	30.846	24.658	1437.9
22.3	22.2	-1.46	25.004	31.145	25.066	1437.4
28.4	28.2	-1.51	25.331	31.642	25.470	1437.9
34.3	34.1	-1.58	25.726	32.259	25.871	1438.5
40.3	40.1	-1.66	25.814	32.467	26.142	1438.5

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.4	-1.46	1441.7	22.37	32.86
10.3	-1.63	1439.6	23.98	32.82
15.3	-1.14	1438.4	24.54	32.50
20.1	-1.40	1437.9	24.96	31.01
25.1	-1.50	1437.8	25.26	31.39
30.2	-1.51	1438.5	25.67	31.89
35.3	-1.59	1438.8	25.97	32.25
40.2	-1.65	1438.8	26.12	32.44
45.3	-1.65	1438.8	26.13	32.46
50.3	-1.65	1438.9	26.14	32.46
52.5	-1.65	1439.0	26.15	32.47

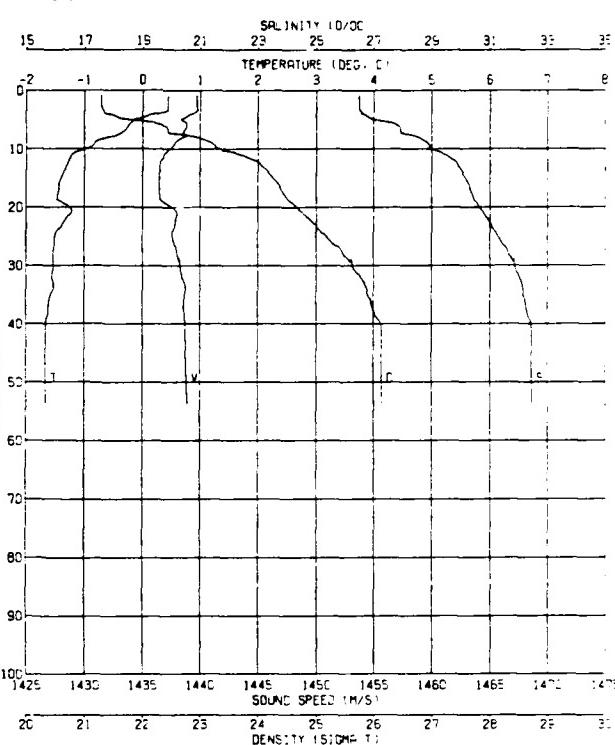
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
116	X		247	1221	Ship	71 27.1	158 57.9
117		X					

116



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.6	1.6	20.41	22.036	35.616	26.516	1435.7
6.6	6.6	-0.63	22.666	35.616	27.213	1435.6
12.0	12.0	-1.26	24.049	35.616	28.648	1435.5
17.4	17.3	-1.45	24.403	35.615	30.315	1435.3
22.8	22.7	-1.30	24.866	35.610	30.830	1435.2
29.1	29.0	-1.55	25.389	35.605	31.762	1435.0
35.2	35.0	-1.80	25.705	35.600	32.251	1434.9
41.3	41.1	-1.67	25.420	35.605	32.487	1434.8
41.7	41.5	-1.67	25.820	35.606	32.486	1434.7

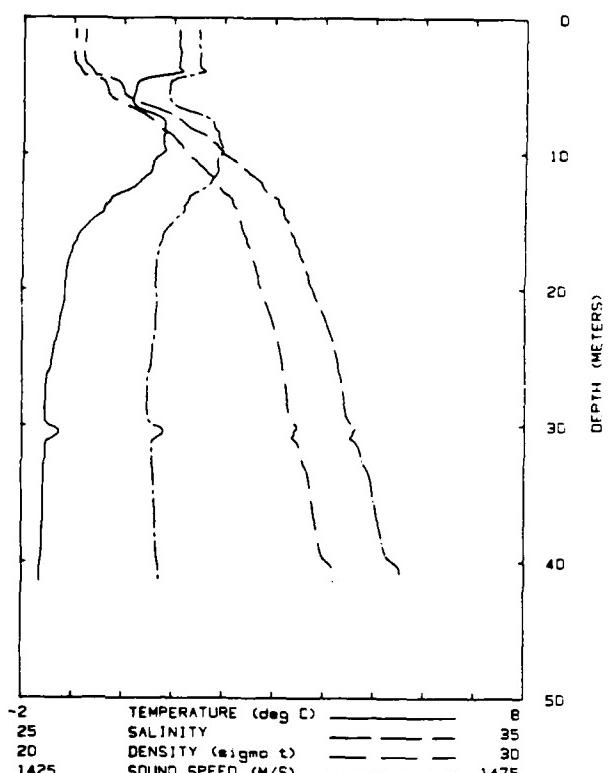
117



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (10/ooC)
5.5	-1.19	1438.9	22.23	27.66
10.1	-1.03	1437.3	23.39	29.08
15.1	-1.40	1436.5	24.28	30.17
20.1	-1.24	1437.7	24.67	30.66
25.4	-1.51	1437.7	25.22	31.33
30.1	-1.54	1438.3	25.64	31.85
35.3	-1.58	1438.7	25.91	32.19
40.1	-1.66	1438.7	26.13	32.45
45.3	-1.67	1438.8	26.14	32.47
50.0	-1.67	1438.8	26.14	32.47
53.8	-1.67	1438.9	26.14	32.46

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 118 X 247 1303 Ship 71 25.1 158 55.9  
 119 X

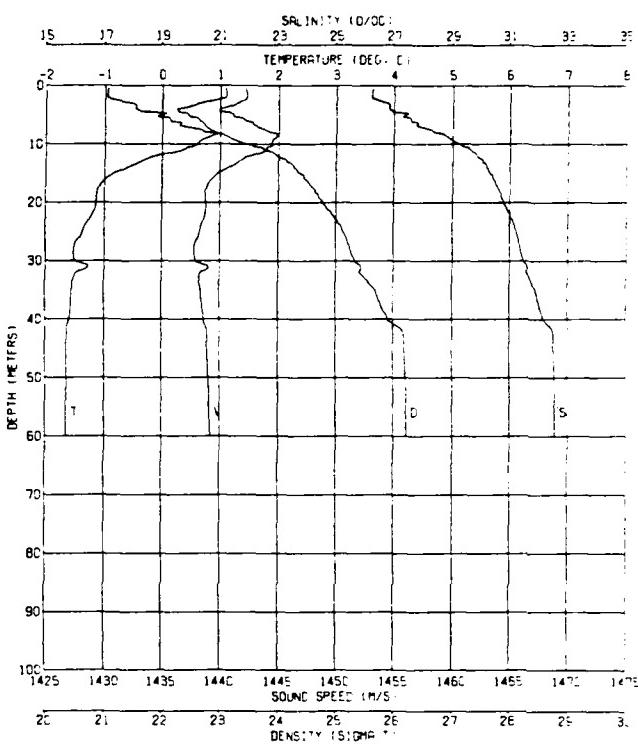
118



-2 TEMPERATURE (deg C) 8  
 25 SALINITY 35  
 20 DENSITY ( $\sigma_{\text{sigma}}$  t) 30  
 1425 SOUND SPEED (m/s) 1475

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
2.1	2.1	1.10	23.068	26.224	21.029	1442.5
7.1	7.1	0.59	24.063	27.826	22.414	1442.4
12.1	12.0	0.36	25.287	29.701	23.847	1443.6
17.1	17.0	-1.00	24.875	30.501	24.536	1438.6
22.0	21.8	-1.22	25.077	31.001	24.945	1438.3
27.0	27.0	-1.53	25.108	31.359	25.241	1437.4
32.0	32.2	-1.55	25.371	31.737	25.548	1437.9
37.0	37.6	-1.59	25.627	32.132	25.868	1438.4

119

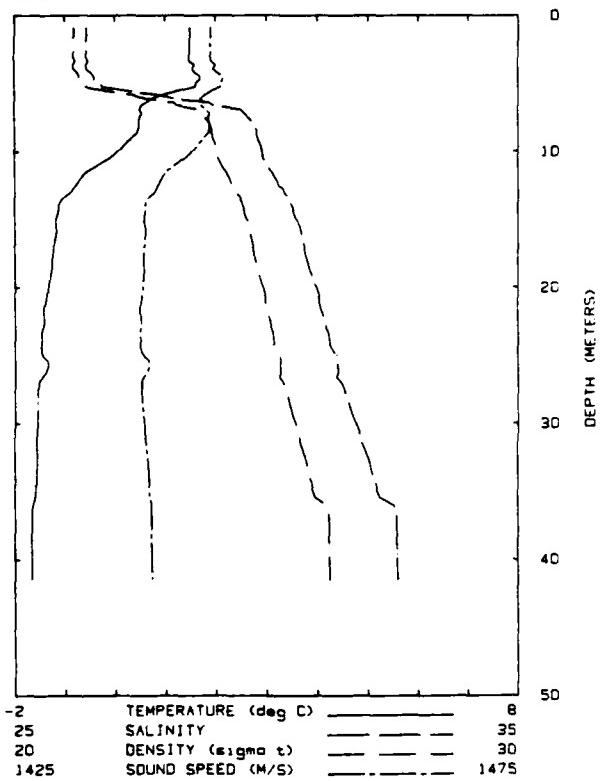


DEPTH (M) T (C) V (M/S) DENSITY S (‰)

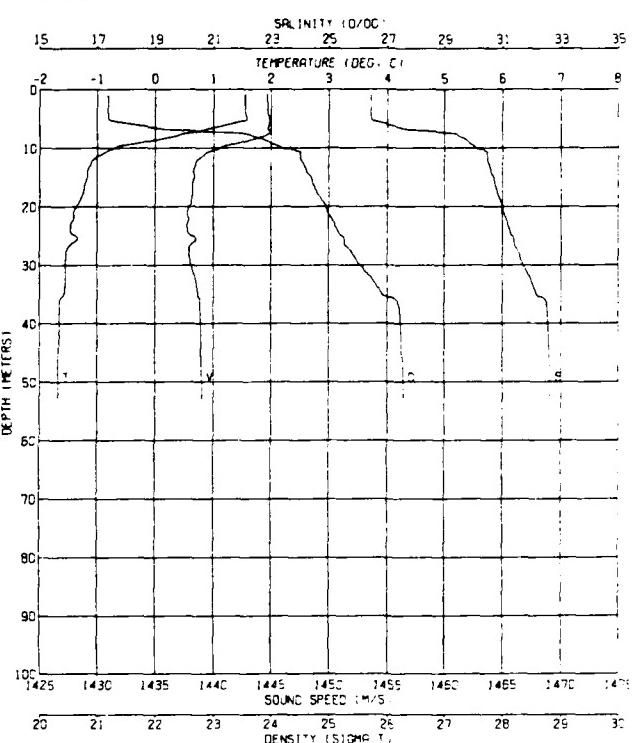
5.2	.47	1441.1	21.92	27.31
10.3	.57	1444.5	23.57	29.36
15.0	-.85	1439.8	24.37	30.31
20.4	-1.15	1438.8	24.81	30.83
25.1	-1.38	1438.3	25.14	31.23
30.2	-1.47	1438.1	25.34	31.48
35.1	-1.56	1438.4	25.70	31.92
40.2	-1.60	1438.7	25.92	32.20
45.3	-1.65	1439.0	26.19	32.53
50.2	-1.65	1439.1	26.21	32.56
55.1	-1.65	1439.1	26.22	32.56
59.9	-1.65	1439.2	26.23	32.58

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
120	X		247	1343	Ship	71 22.2	158 53.9
121		X					

120



121



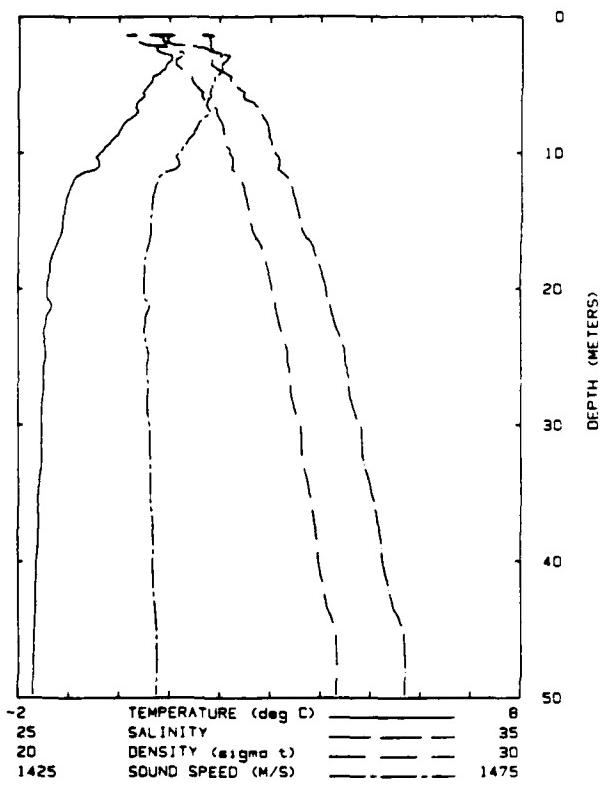
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.0	1.0	1.48	23.506	26.439	21.183	1444.5
4.5	4.5	1.70	23.778	26.594	21.297	1445.7
8.9	8.9	0.11	25.255	29.900	24.017	1441.9
15.8	15.7	-1.17	24.878	30.878	24.683	1436.1
21.9	21.8	-1.44	24.881	31.086	25.026	1437.4
28.2	28.1	-1.35	25.261	31.587	25.427	1437.7
34.5	34.3	-1.58	25.646	32.146	25.881	1438.4
40.5	40.3	-1.87	25.898	32.592	26.243	1438.7
41.7	41.4	-1.87	25.801	32.587	26.247	1438.7

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/OO)
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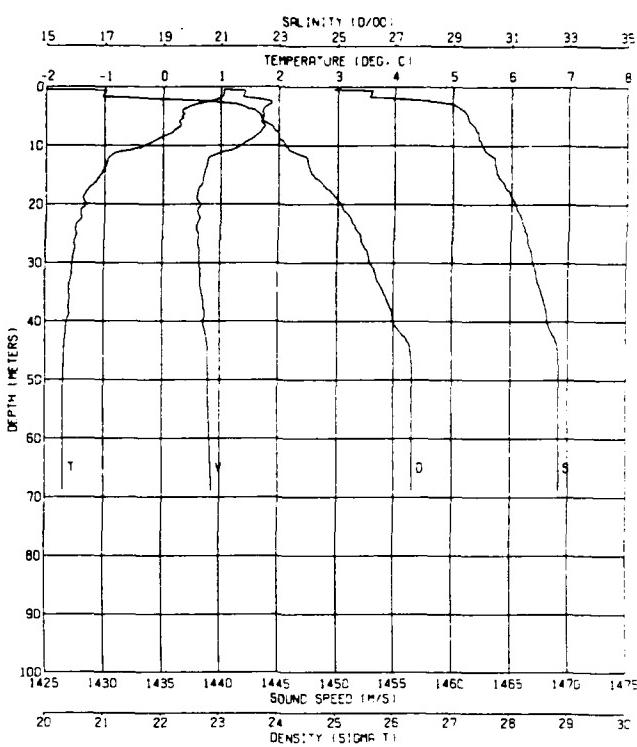
5.2	1.59	1445.0	21.22	26.48
10.1	-.72	1440.6	24.17	30.06
15.0	-1.16	1438.5	24.67	30.66
20.1	-1.36	1438.1	24.93	30.98
25.2	-1.35	1438.5	25.26	31.39
30.1	-1.55	1438.2	25.53	31.71
35.0	-1.58	1438.7	25.89	32.16
40.2	-1.66	1438.9	26.22	32.56
45.0	-1.67	1439.0	26.25	32.59
50.2	-1.69	1439.0	26.27	32.63
52.9	-1.69	1439.1	26.29	32.65

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
122	X		247	1438	Ship	71 18.8	158 49.5
123		X					

122



123



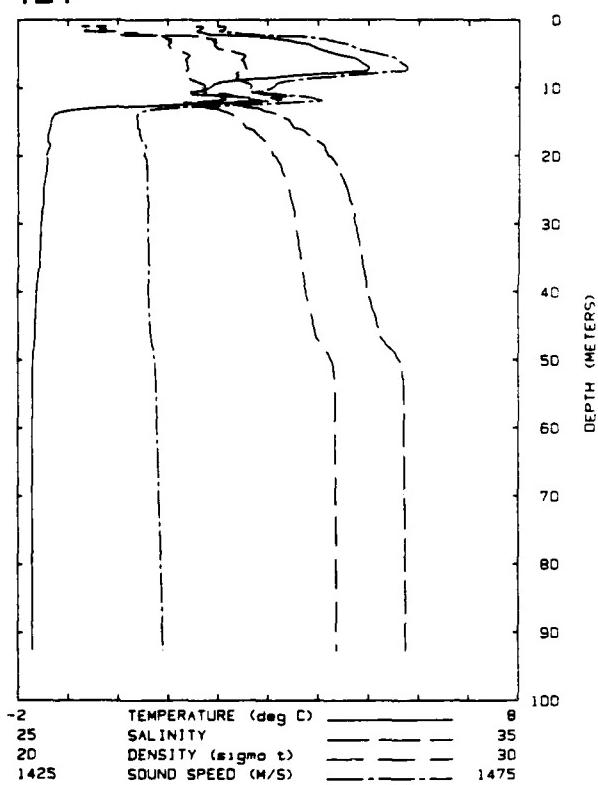
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.4	1.4	1.10	24.239	27.691	22.203	1444.4
5.8	5.8	0.52	25.225	29.468	23.653	1444.2
10.8	10.7	-0.40	25.077	30.169	24.252	1442.9
18.1	18.0	-1.15	24.885	30.672	24.877	1438.1
21.4	21.3	-1.33	25.145	31.203	25.111	1438.1
27.2	27.0	-1.49	25.299	31.578	25.417	1437.9
33.0	32.8	-1.55	25.468	31.869	25.654	1438.1
38.8	38.8	-1.60	25.692	32.228	25.846	1438.5
45.0	44.8	-1.68	25.922	32.631	26.275	1438.7
51.2	50.8	-1.71	25.952	32.689	26.330	1438.8

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
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5.2	.35	1443.7	23.70	29.52
10.1	-.34	1441.6	24.14	30.04
15.0	-1.08	1438.6	24.60	30.57
20.3	-1.34	1438.2	25.07	31.15
25.2	-1.49	1438.1	25.41	31.56
30.2	-1.55	1438.2	25.59	31.79
35.0	-1.60	1438.4	25.82	32.08
40.1	-1.64	1438.6	25.99	32.28
45.1	-1.69	1439.0	26.29	32.65
50.0	-1.70	1439.0	26.31	32.68
55.1	-1.70	1439.1	26.31	32.67
60.1	-1.70	1439.1	26.31	32.67
65.1	-1.70	1439.2	26.31	32.67
69.0	-1.70	1439.3	26.31	32.67

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
124	X		247	1521	Ship	71 16.2	158 47.0
125		X					

124



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.0	1.0	8.57	23.760	26.692	21.382	1445.2
4.9	4.9	4.29	28.010	25.380	23.323	1462.6
10.3	10.3	1.76	28.294	28.639	23.725	1450.1
15.6	15.5	-1.35	24.595	30.478	24.526	1436.9
20.8	20.7	-1.41	25.185	31.315	25.203	1437.9
25.7	26.6	-1.49	25.331	31.628	25.459	1438.0
32.4	32.2	-1.56	25.416	31.808	25.808	1438.0
38.6	38.5	-1.61	25.490	31.968	25.736	1438.0
45.3	45.0	-1.68	25.611	32.185	25.912	1438.2
51.8	51.5	-1.71	25.938	32.668	26.320	1438.8
58.4	58.0	-1.72	25.961	32.718	26.346	1438.9
64.5	64.1	-1.72	25.967	32.723	26.350	1439.0
70.8	70.4	-1.72	25.877	32.732	26.357	1439.1
72.1	71.7	-1.71	25.894	32.739	26.363	1439.1
77.4	76.8	-1.71	25.899	32.742	26.365	1439.2
83.8	83.4	-1.71	25.986	32.746	26.368	1439.4
89.3	88.8	-1.71	26.000	32.747	26.369	1439.5
93.2	92.6	-1.71	26.004	32.749	26.371	1439.5

125

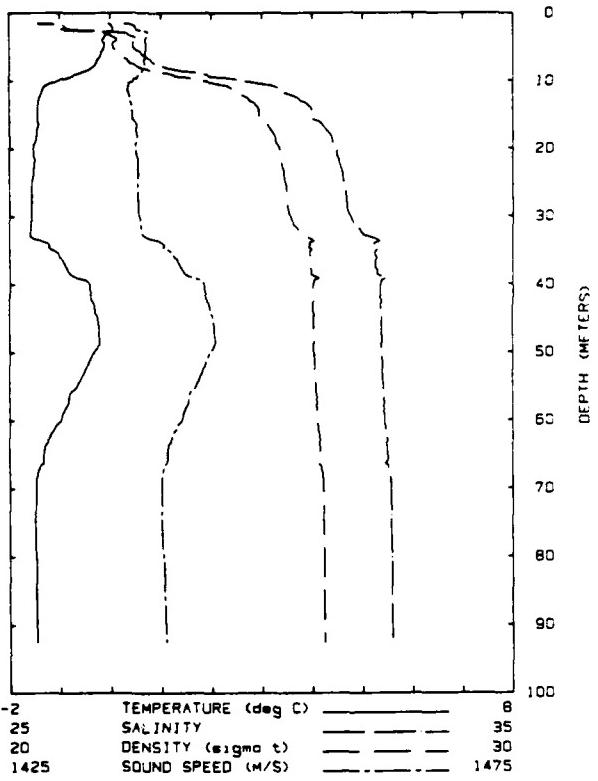


DEPTH (M)	T (C)	V (m/s)	DENSITY	S (‰)
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5.2	4.47	1459.6	23.16	29.13
10.1	1.75	1451.1	23.64	29.55
15.1	-1.38	1438.5	24.67	30.66
20.4	-1.41	1438.4	25.16	31.26
25.2	-1.48	1438.4	25.46	31.63
30.2	-1.54	1438.3	25.60	31.81
35.0	-1.56	1438.3	25.65	31.87
40.1	-1.61	1438.3	25.75	31.99
45.1	-1.65	1438.4	25.87	32.4
50.3	-1.68	1438.7	26.06	32.37
55.1	-1.71	1439.1	26.33	32.69
60.2	-1.71	1439.2	26.34	32.71
65.3	-1.71	1439.2	26.33	32.70
70.2	-1.71	1439.3	26.34	32.71
75.1	-1.71	1439.4	26.34	32.71
80.2	-1.70	1439.5	26.34	32.72
85.1	-1.70	1439.6	26.35	32.72
90.3	-1.70	1439.7	26.35	32.72
95.3	-1.70	1439.8	26.35	32.72
100.1	-1.70	1439.9	26.34	32.72
108.7	-1.70	1440.0	26.34	32.71

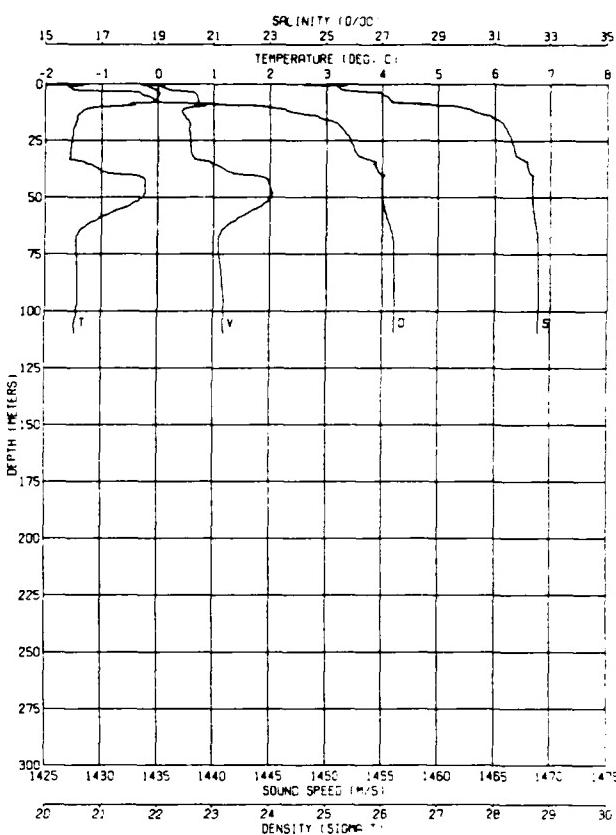
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
126 127	X	X	247	1627	Ship	71 13.6	158 43.1

126



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.6	1.6	-0.02	21.883	25.660	20.820	1436.6
1.6	1.6	-0.02	21.847	25.628	20.598	1436.5
1.6	1.6	-0.02	21.801	25.693	20.640	1436.6
5.0	5.0	-0.12	23.187	27.441	22.048	1436.5
10.3	10.2	-1.06	24.287	29.778	23.854	1437.3
15.8	15.7	-1.45	24.914	31.013	24.860	1437.2
21.5	21.4	-1.90	25.241	31.519	25.370	1437.7
27.7	27.5	-1.56	25.322	31.684	25.505	1437.8
34.2	34.0	-1.23	25.878	32.232	25.841	1440.1
40.5	40.2	-0.41	26.721	32.351	26.010	1444.2
45.7	45.4	-0.24	26.888	32.382	26.026	1445.2
50.9	50.6	-0.37	26.790	32.389	26.039	1444.7
56.5	56.2	-0.80	26.482	32.437	26.094	1442.8
62.8	62.4	-1.20	26.191	32.470	26.133	1441.1
69.1	68.7	-1.47	26.053	32.569	26.220	1440.0
75.0	74.5	-1.49	26.049	32.582	26.230	1440.0
81.2	80.7	-1.47	26.075	32.591	26.238	1440.3
87.6	87.0	-1.47	26.063	32.597	26.242	1440.4
92.9	92.3	-1.46	26.087	32.595	26.240	1440.5
93.1	92.5	-1.47	26.088	32.597	26.242	1440.5

127

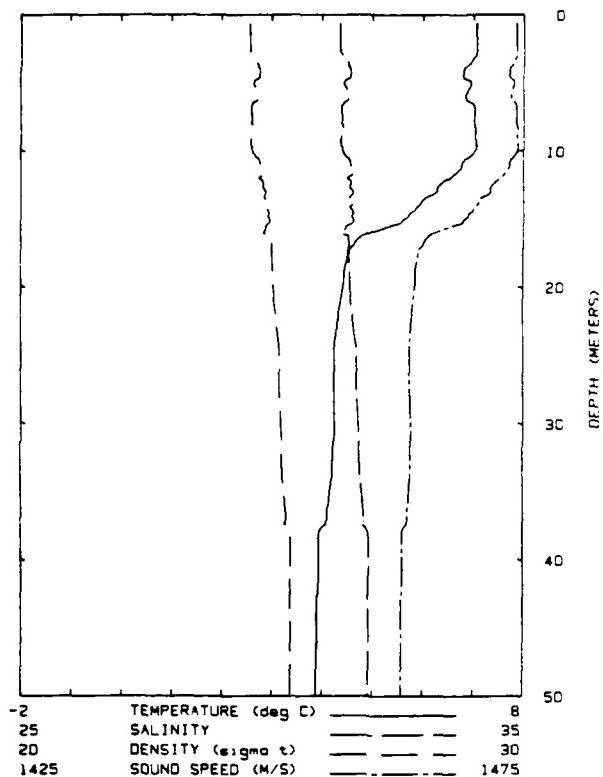


DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/oo)
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5.4	0.00	1438.6	21.85	27.19
10.5	-1.17	1437.7	24.08	29.94
15.1	-1.43	1437.5	24.89	30.93
20.3	-1.50	1437.8	25.30	31.43
25.1	-1.52	1438.0	25.43	31.59
30.3	-1.56	1438.0	25.53	31.71
35.1	-1.25	1439.9	25.85	32.12
40.2	-1.49	1443.5	26.05	32.39
45.1	-1.23	1445.1	26.01	32.35
50.2	-1.28	1445.1	26.01	32.36
55.2	-1.68	1443.7	26.04	32.38
60.2	-1.08	1442.0	26.10	32.43
65.2	-1.40	1440.6	26.17	32.51
70.0	-1.44	1440.5	26.21	32.56
75.0	-1.43	1440.5	26.22	32.56
80.1	-1.43	1440.6	26.22	32.56
85.3	-1.42	1440.7	26.22	32.56
90.2	-1.43	1440.8	26.22	32.56
95.2	-1.43	1440.9	26.22	32.56
100.2	-1.44	1440.9	26.22	32.56
110.0	-1.47	1440.9	26.23	32.58

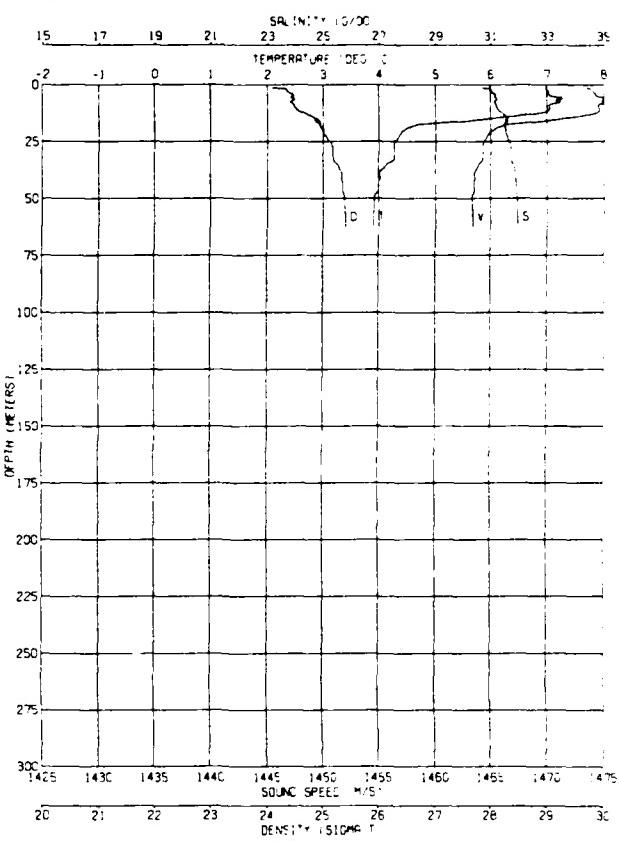
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
128	X		247	1726	Ship	71 9.0	158 38.2
129		X					

128



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.8	0.8	7.06	32.000	31.352	24.565	1474.3
4.7	4.6	6.92	32.000	31.569	24.766	1473.7
8.7	8.6	7.06	32.020	31.372	24.581	1474.4
14.7	14.6	5.74	31.142	31.821	24.941	1469.6
19.7	19.6	4.43	30.000	31.555	25.030	1464.2
24.7	24.6	4.24	29.881	32.684	25.152	1463.7
29.6	28.5	4.24	29.893	31.717	25.179	1463.8
34.7	34.5	4.17	29.899	31.787	25.241	1463.7
39.8	39.7	3.94	29.832	31.837	25.382	1463.0
44.8	44.6	3.89	29.892	31.826	25.379	1462.9
49.8	49.5	3.88	29.848	31.831	25.383	1462.9
50.8	50.5	3.87	29.861	31.833	25.385	1462.9

129

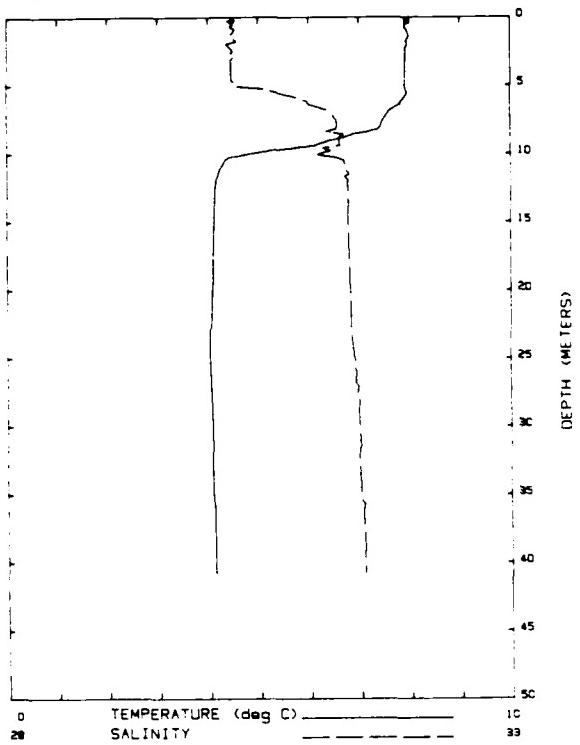


DEPTH (M)	T (C)	V (M/S)	DENSITY	S (10/oo)
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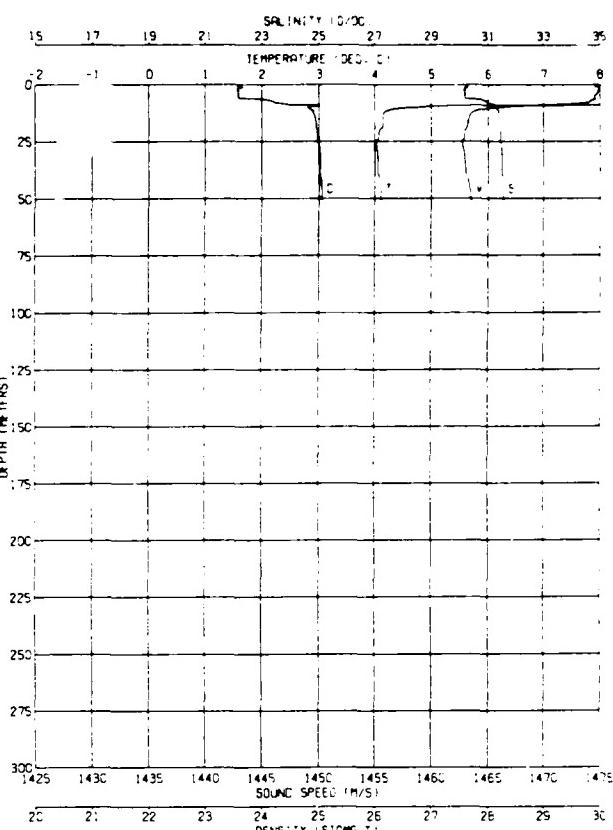
5.2	7.10	1474.5	24.46	31.17
10.4	7.05	1474.6	24.52	31.25
15.3	5.89	1473.2	24.92	31.61
20.1	4.45	1465.2	25.00	31.53
25.2	4.28	1464.4	25.14	31.67
30.1	4.28	1464.3	25.17	31.70
35.0	4.15	1463.9	25.26	31.80
40.2	4.02	1463.5	25.34	31.88
45.3	4.00	1463.5	25.35	31.90
50.2	3.93	1463.3	25.39	31.93
55.1	3.91	1463.3	25.40	31.94
60.2	3.90	1463.4	25.40	31.94
62.4	3.90	1463.4	25.42	31.97

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
130	X		247	2140	Ship	70 49.2	160 13.7
131		X					

130



131

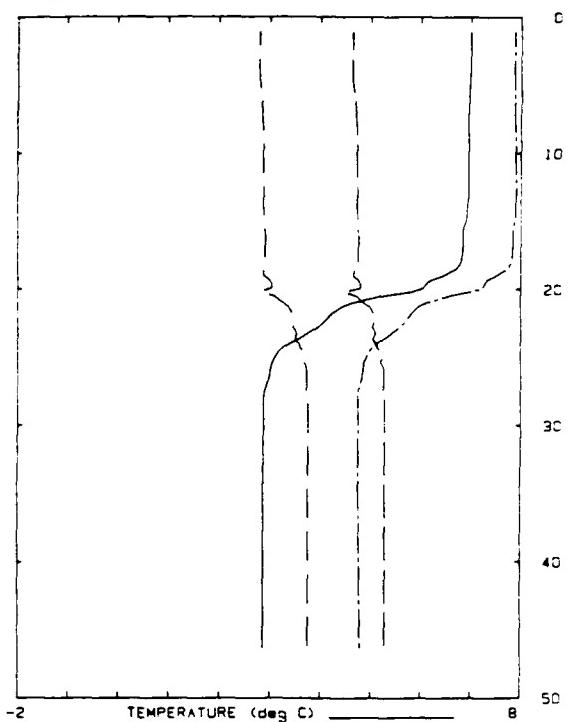


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.1	1.1	7.81	31.666	30.236	23.575	1476.2
4.7	4.6	7.80	31.653	30.229	23.571	1476.2
9.9	9.8	6.36	31.377	31.302	24.814	1471.6
14.9	14.9	4.12	29.606	31.382	24.933	1462.6
20.0	19.9	4.09	29.586	31.405	24.946	1461.6
25.1	25.0	4.02	29.569	31.434	24.976	1462.4
30.4	30.2	4.07	29.654	31.480	25.015	1462.8
35.5	35.3	4.08	29.680	31.501	25.023	1463.0
40.6	40.4	4.11	29.321	31.054	24.868	1462.6

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰/‰)
5.1	7.90	1476.6	23.58	30.18
10.1	6.73	1466.1	24.63	31.11
15.0	4.15	1463.5	24.87	31.32
20.3	4.08	1463.1	24.92	31.37
25.2	4.04	1462.9	24.95	31.40
30.2	4.05	1463.0	25.00	31.46
35.1	4.06	1463.0	25.01	31.47
40.1	4.08	1463.2	25.03	31.50
45.0	4.10	1463.4	25.04	31.52
50.0	4.11	1463.5	25.05	31.52
51.2	4.11	1463.6	25.07	31.55

Station ASL APL Julian GMT  
 Number Cast Cast Day hmmm Platform Latitude Longitude  
 132 X 247 2236 Ship 70 55.4 160 18.9  
 133 X

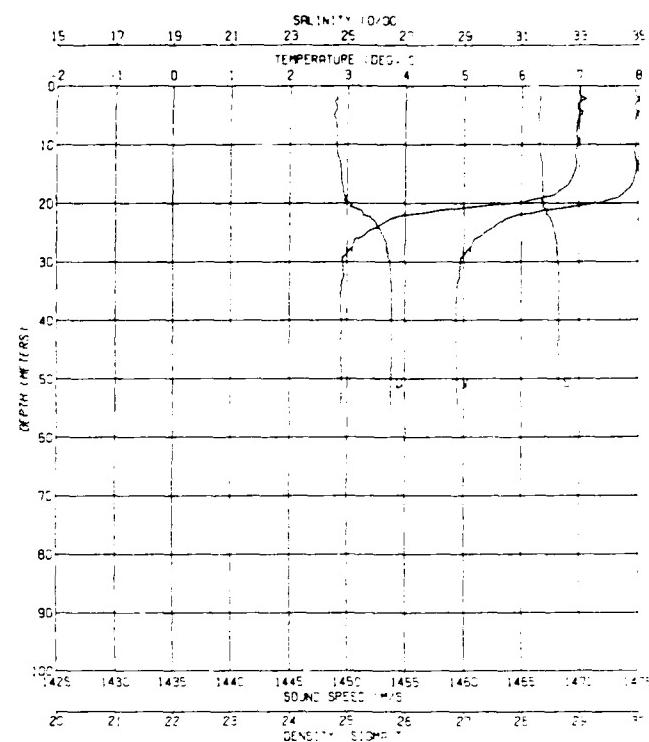
132



-2 TEMPERATURE (deg C) 8  
 25 SALINITY 35  
 20 DENSITY ( $\sigma_t$ ) 30  
 1425 SOUND SPEED (m/s) 1475

PRESSURE DEPTH Mbar	DEPTH (M)	TEMPERATURE (deg C.)	CONDUCTIVITY mS/cm.	SALINITY	DENSITY	_SOUND VELOCITY m/sec.
1.3	1.3	6.99	32.195	31.628	24.791	1474.3
1.2	1.2	6.99	32.195	31.629	24.792	1474.3
2.5	2.5	6.99	32.191	31.625	24.789	1474.3
8.8	8.7	6.96	32.263	31.727	24.873	1474.5
14.7	14.8	6.92	32.254	31.750	24.896	1474.4
20.6	20.5	5.22	30.819	31.737	25.091	1467.7
26.0	25.8	1.02	29.440	32.267	25.728	1459.3
31.0	31.3	2.87	29.345	32.293	25.760	1458.8
36.7	36.5	2.87	29.347	32.293	25.761	1458.8
41.0	41.6	2.87	29.349	32.293	25.761	1458.9
46.3	46.0	2.87	29.353	32.294	25.762	1459.0
46.5	46.3	2.87	29.355	32.297	25.764	1459.0

133

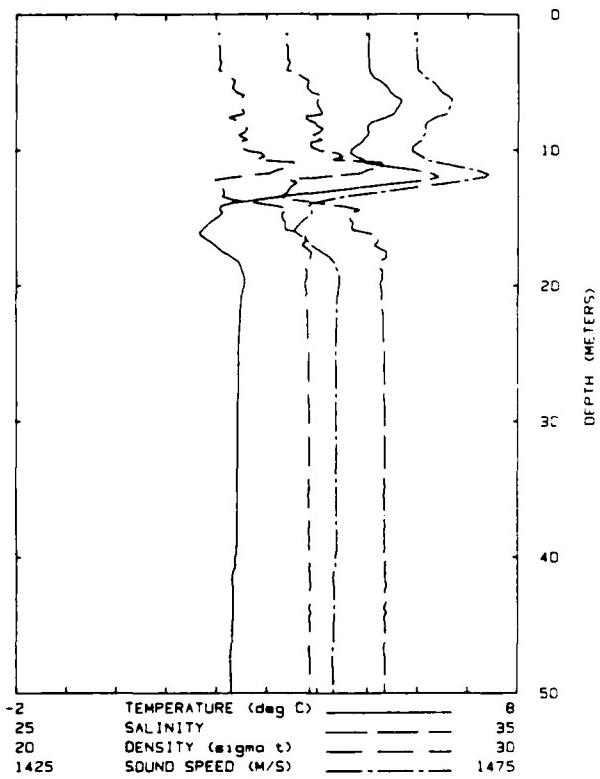


DEPTH M T (C) V (M/S) DENSITY S (‰/OO)

5.1	7.04	1474.9	24.77	31.56
10.1	6.97	1474.8	24.82	31.62
15.3	6.90	1474.7	24.90	31.71
20.1	5.90	1471.5	25.02	31.74
25.2	3.33	1462.0	25.52	32.07
30.2	2.93	1460.0	25.67	32.20
35.1	2.90	1459.6	25.70	32.22
40.2	2.91	1459.5	25.72	32.25
45.1	2.90	1459.4	25.74	32.26
50.0	2.91	1459.5	25.74	32.27
54.7	2.90	1459.5	25.75	32.28

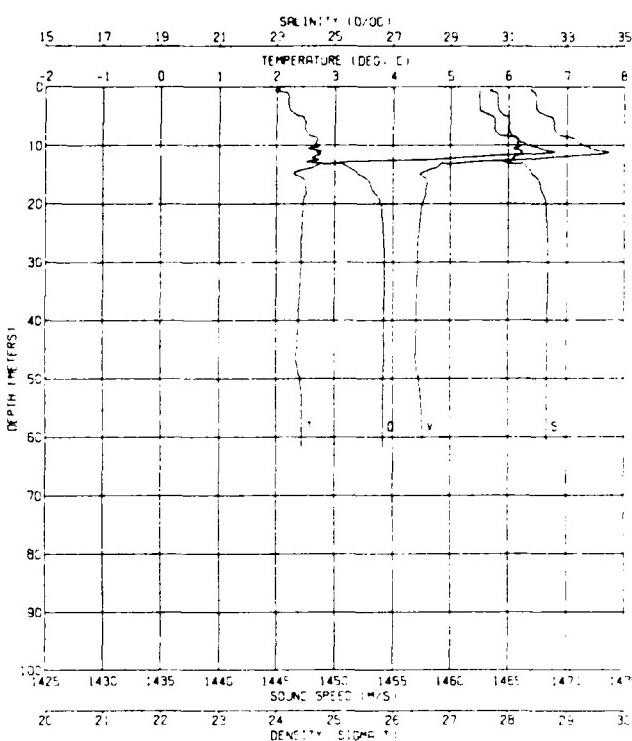
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
134	X		247	2313	Ship	70 57.5	160 24.3
135		X					

134



-2 TEMPERATURE (deg C) 8  
25 SALINITY 35  
20 DENSITY (sigma t) 30  
1425 SOUND SPEED (M/S) 1475

135



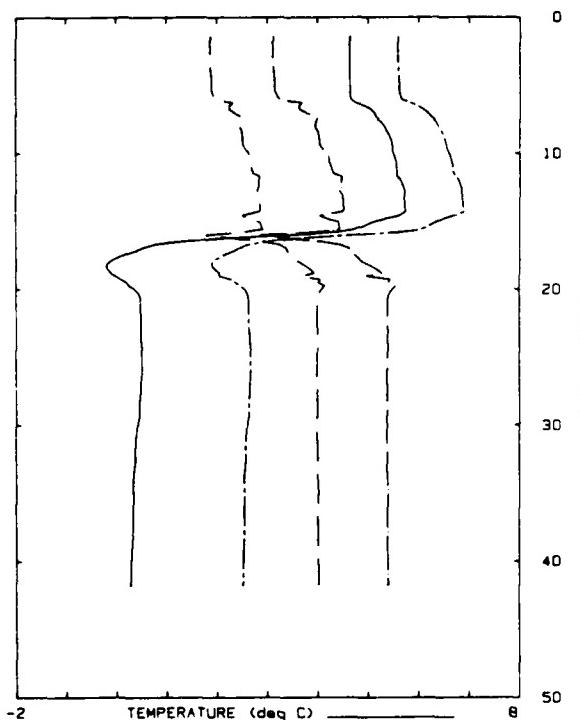
DEPTH (M) T (C) V (M/S) DENSITY S (‰)

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.4	1.4	5.01	29.462	30.402	24.060	1464.6
1.5	1.5	5.02	29.481	30.410	24.065	1464.9
5.5	5.5	5.41	30.136	30.786	24.327	1467.1
11.0	11.0	4.86	31.080	32.287	25.554	1467.2
16.2	16.1	1.68	28.097	31.867	25.591	1452.9
21.1	21.0	2.51	28.037	32.289	25.788	1457.0
26.1	26.0	2.44	29.027	32.339	25.832	1456.9
31.2	31.0	2.42	29.017	32.346	25.840	1456.9
36.1	35.9	2.42	29.016	32.341	25.836	1456.9
40.4	40.1	2.37	28.896	32.367	25.861	1456.8
41.9	41.7	2.31	28.840	32.358	25.856	1456.6
45.4	45.1	2.31	28.840	32.357	25.857	1456.6
48.8	48.6	2.30	28.834	32.360	25.861	1456.6
50.8	50.5	2.28	28.820	32.368	25.866	1456.6
50.7	50.4	2.31	28.850	32.369	25.867	1456.7

5.1	5.74	1468.7	24.47	30.99
10.3	6.47	1471.9	24.74	31.42
15.3	2.38	1457.5	25.48	31.92
20.1	2.45	1457.5	25.80	32.30
25.1	2.44	1457.2	25.84	32.34
30.0	2.43	1457.1	25.85	32.36
35.3	2.40	1457.0	25.85	32.36
40.3	2.39	1457.1	25.85	32.35
45.1	2.36	1457.0	25.85	32.35
50.3	2.41	1457.3	25.84	32.34
55.2	2.44	1457.5	25.83	32.33
60.1	2.44	1457.5	25.83	32.33
61.7	2.44	1457.6	25.83	32.34

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
136	X		248	0012	Ship	71 0.6	160 27.1
137		X					

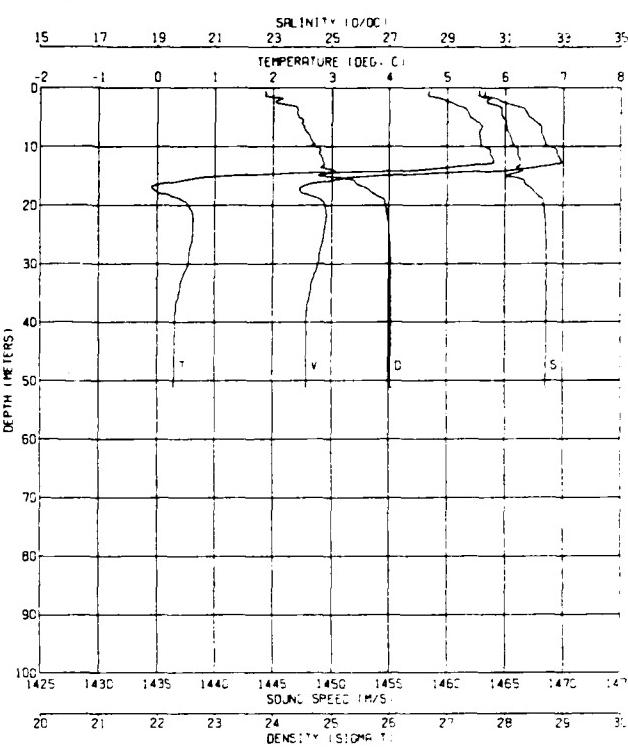
136



-2	TEMPERATURE (deg C)	8
25	SALINITY	35
20	DENSITY ( $\sigma_t$ )	30
1425	SOUND SPEED (M/S)	1475

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.0	2.0	4.64	28.920	30.113	23.869	1463.0
6.6	6.6	4.94	29.817	30.632	24.248	1465.0
11.8	11.7	5.58	30.893	31.487	24.853	1468.7
17.1	17.0	0.55	26.926	31.629	25.387	1447.3
22.0	21.8	0.90	27.472	32.386	25.897	1448.2
27.1	26.9	0.49	27.474	32.386	25.998	1448.3
32.2	32.0	0.38	27.392	32.393	26.008	1447.9
37.3	37.1	0.34	27.361	32.389	26.015	1447.7
41.8	41.6	0.29	27.328	32.405	26.023	1447.6
42.0	41.7	0.30	27.325	32.392	26.012	1447.6

137

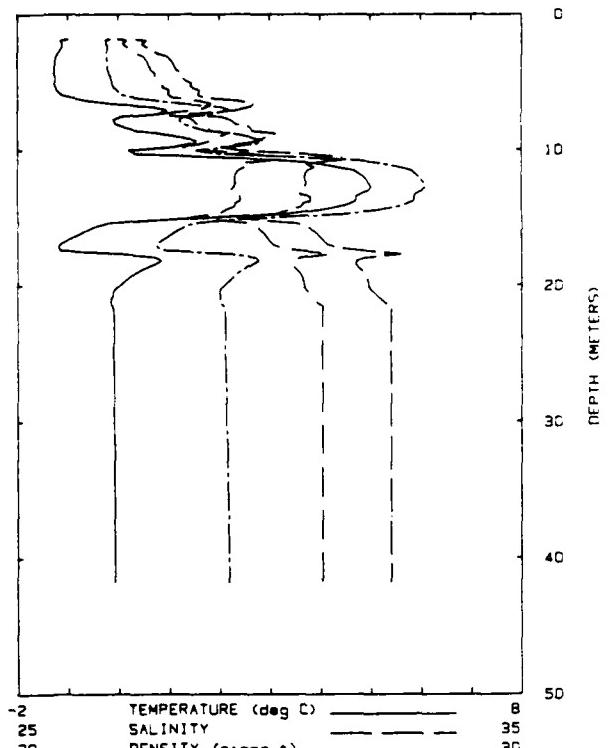


DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
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5.4	5.42	1467.2	24.53	31.02
10.1	5.65	1469.0	24.82	31.43
15.0	2.95	1458.6	23.54	29.58
20.1	.55	1449.9	25.81	32.18
25.1	.62	1449.7	25.91	32.30
30.3	.54	1449.1	25.95	32.33
35.3	.38	1448.4	25.98	32.36
40.2	.31	1448.0	26.00	32.38
45.0	.30	1448.0	26.02	32.40
50.2	.29	1448.0	26.01	32.39
51.2	.29	1448.0	26.05	32.44

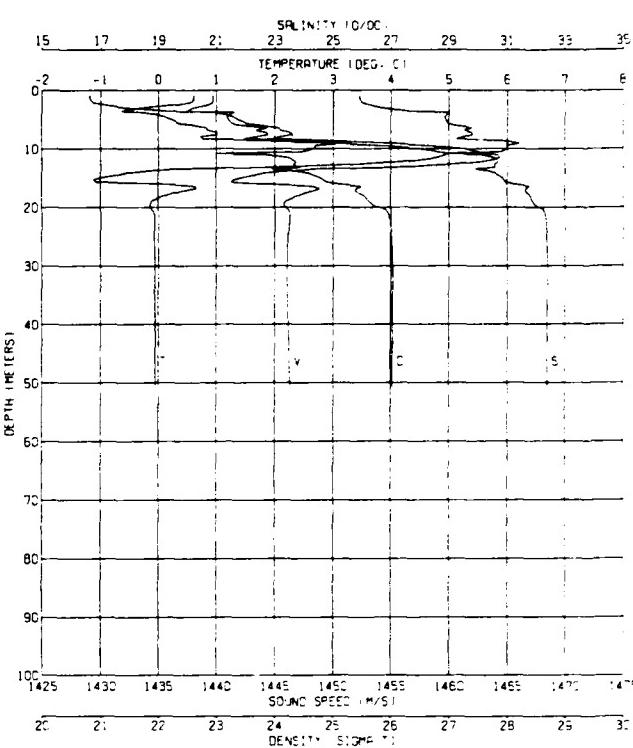
Station ASL Julian GMT  
 Number Cast Day hhmm Platform Latitude Longitude  
 138 X 248 0054 Ship 71 3.2 160 29.5  
 139 X

138



-2 TEMPERATURE (deg C) 8  
 25 SALINITY 35  
 20 DENSITY ( $\sigma_t$ ) 30  
 1425 SOUND SPEED (M/S) 1475

139



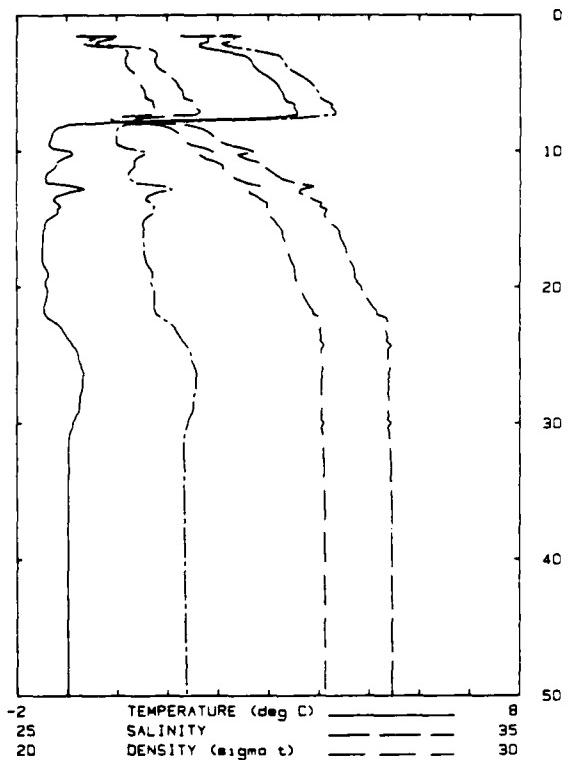
DEPTH (M) T (C) V (M/S) DENSITY S (1/C)

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.9	1.8	-1.14	22.566	27.547	22.154	1423.8
4.9	4.9	-1.24	23.077	28.329	22.785	1434.4
10.1	10.1	0.20	24.853	29.421	23.829	1442.7
15.3	15.3	0.60	25.680	29.850	24.036	1445.3
20.5	20.4	-0.07	26.732	32.015	25.726	1445.1
25.5	25.4	-0.08	27.017	32.412	26.046	1445.6
30.7	30.5	-0.08	27.029	32.414	26.047	1445.7
35.9	35.7	-0.07	27.036	32.409	26.043	1445.8
41.1	40.8	-0.07	27.045	32.412	26.045	1445.9
42.0	41.8	-0.07	27.043	32.410	26.043	1446.0

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (1/C)
5.1	.22	1442.0	23.23	38.93
10.1	4.62	1461.7	24.66	31.02
15.3	-1.11	1441.6	24.82	30.86
20.1	-1.14	1446.2	25.77	32.08
25.2	-.07	1446.3	25.94	32.29
30.1	-.06	1446.2	25.98	32.34
35.1	-.06	1446.2	26.01	32.37
40.1	-.06	1446.2	26.01	32.37
45.1	-.06	1446.2	26.02	32.38
50.0	-.05	1446.3	26.02	32.36
50.8	-.05	1446.3	26.04	32.40

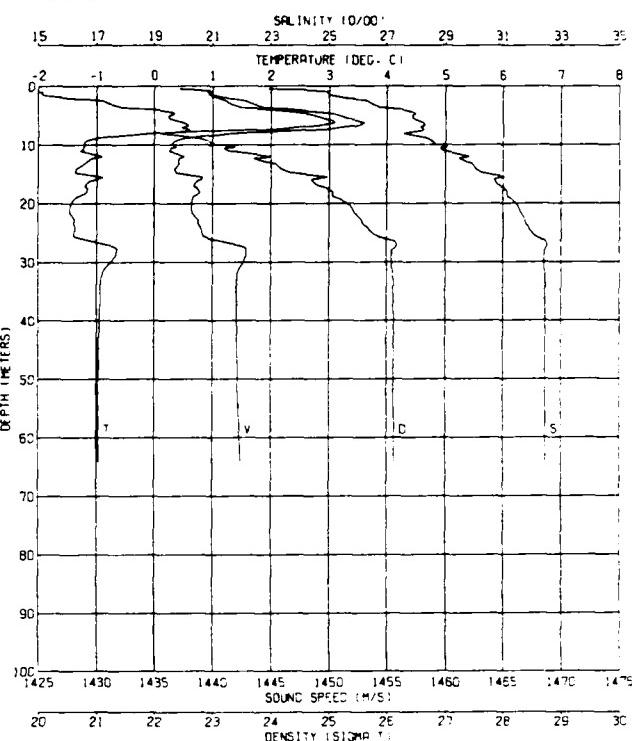
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
140	X		248	0137	Ship	71 5.9	160 32.7
141		X					

140



-2	TEMPERATURE (deg C)	8
25	SALINITY	35
20	DENSITY ( $\sigma_t$ )	30
1425	SOUND SPEED (M/S)	1475

141

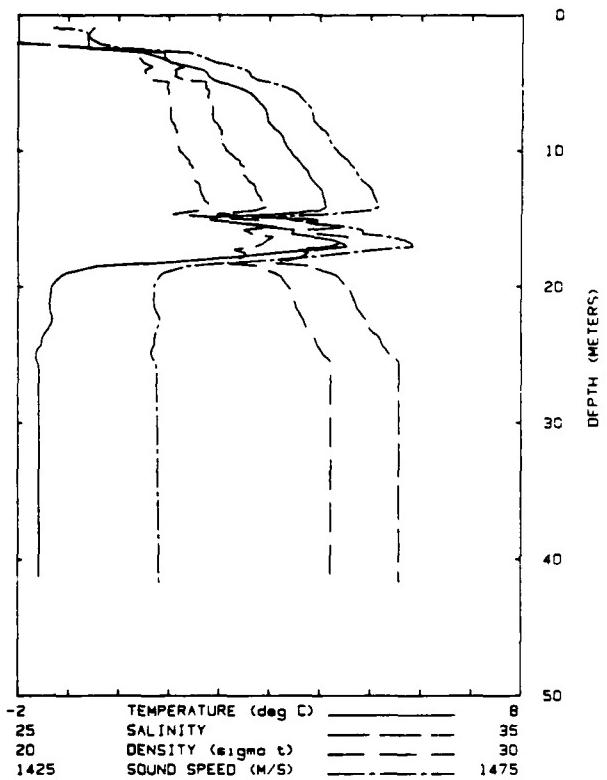


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (m/sec)
1.6	1.6	1.82	24.154	26.952	21.576	1446.7
1.7	1.7	1.82	24.140	26.936	21.564	1446.7
6.4	6.4	3.37	26.587	28.531	22.730	1455.6
11.7	11.6	-1.38	24.288	30.098	24.218	1436.2
17.0	16.9	-1.48	25.259	31.521	25.371	1437.7
22.4	22.3	-1.39	25.949	32.362	26.050	1439.4
28.4	28.2	-0.74	26.497	32.409	26.069	1442.6
34.2	34.1	-0.97	26.348	32.449	26.109	1441.7
40.4	40.2	-0.98	26.352	32.465	26.122	1441.7
46.6	46.3	-0.98	26.361	32.472	26.127	1441.9
52.9	52.2	-0.98	26.365	32.473	26.129	1442.0
52.5	52.2	-0.98	26.366	32.477	26.132	1442.0

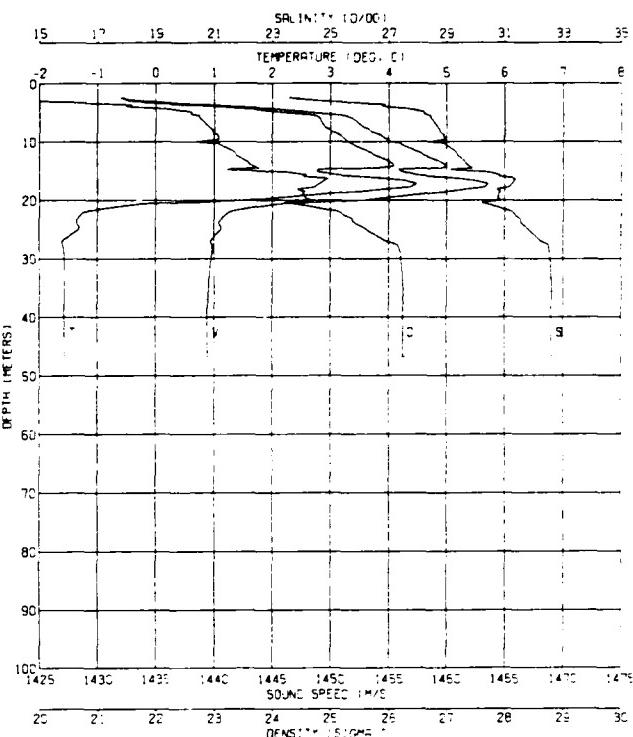
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (10/00')
5.1	2.78	1450.9	22.27	32.86
10.4	-1.23	1437.0	23.36	32.05
15.5	-1.21	1438.8	25.06	31.15
20.4	-1.46	1438.4	25.33	31.47
25.2	-1.41	1439.2	25.74	31.98
30.2	-.75	1442.6	26.09	32.43
35.3	-.93	1442.0	26.12	32.46
40.1	-.95	1442.0	26.12	32.46
45.1	-.96	1442.1	26.12	32.46
50.0	-.98	1442.1	26.11	32.45
55.1	-.97	1442.2	26.12	32.46
60.1	-.97	1442.3	26.12	32.46
64.2	-.96	1442.4	26.12	32.46

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
142	X		248	0244	Ship	71 8.9	160 36.5
143		X					

142



143

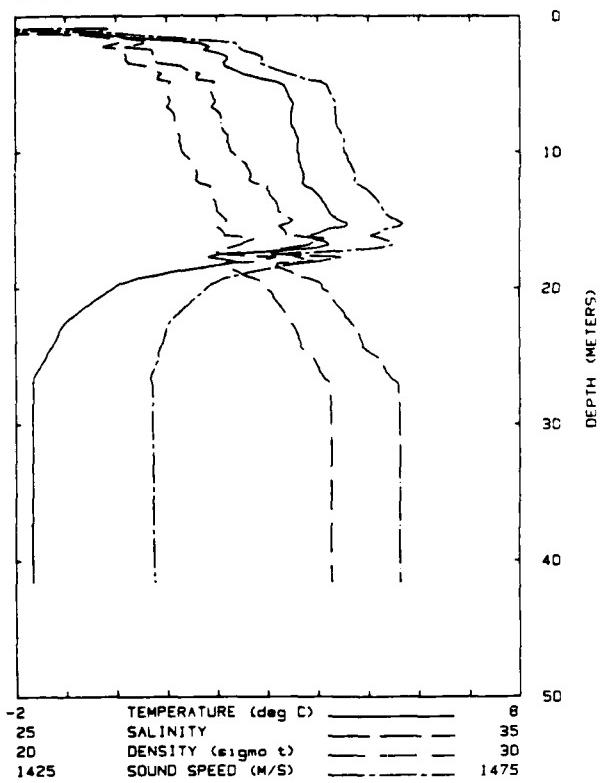


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.0	1.0	-0.52	18.795	22.105	17.761	1429.4
5.6	5.6	2.55	26.199	28.602	23.006	1452.4
10.8	10.8	3.59	27.509	29.423	23.420	1457.6
15.9	15.9	3.51	28.592	30.774	24.499	1459.3
21.1	21.0	-1.37	25.463	31.876	25.495	1438.6
26.3	26.1	-1.58	25.846	32.572	26.225	1438.8
31.7	31.6	-1.58	25.036	32.575	26.227	1438.9
37.5	37.3	-1.58	25.958	32.576	26.227	1439.0
41.8	41.8	-1.58	25.867	32.583	26.233	1439.1
41.8	41.7	-1.57	25.968	32.581	26.232	1439.1

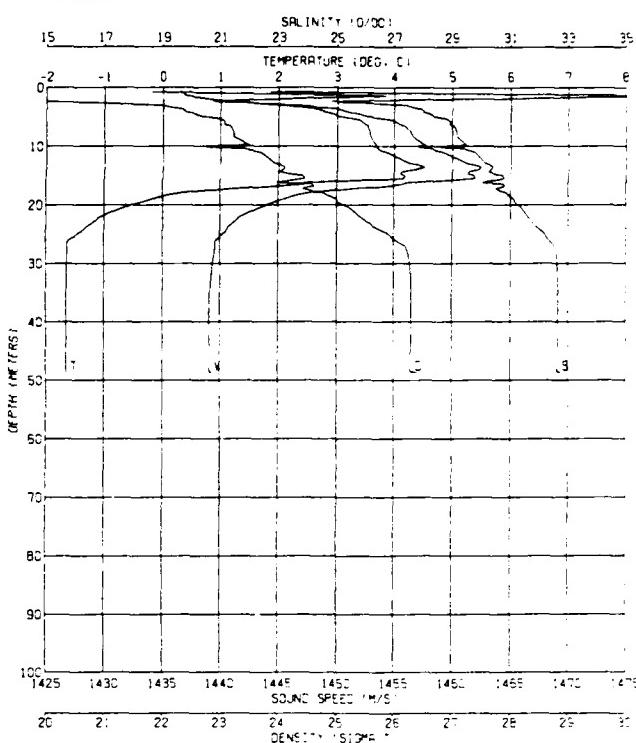
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (P/000)
5.2	2.39	1449.4	22.68	28.34
10.3	3.32	1455.7	23.13	29.01
15.1	2.61	1456.1	24.24	30.38
20.4	1.06	1449.7	23.98	29.94
25.1	-1.32	1440.9	25.52	31.72
30.3	-1.57	1440.1	26.11	32.44
35.1	-1.57	1439.8	26.17	32.51
40.2	-1.57	1439.6	26.19	32.53
45.1	-1.57	1439.6	26.21	32.55
46.8	-1.57	1439.6	26.25	32.61

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
144	X		248	0345	Ship	71 11.6	160 39.8
145		X					

144



145



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec.)
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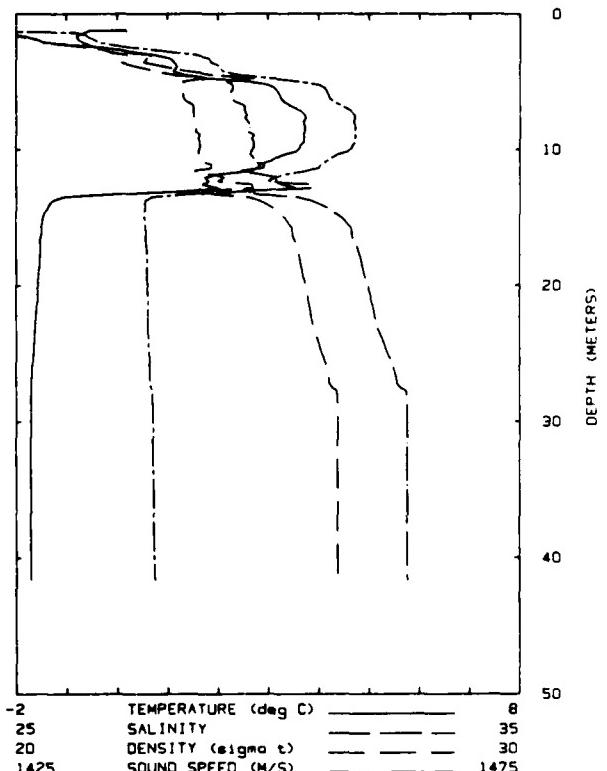
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec.)
1.0	1.0	-0.28	14.543	18.600	13.329	1423.2
4.9	4.9	3.18	26.805	28.959	23.084	1455.3
8.8	8.7	3.60	27.382	29.243	23.276	1457.6
12.7	14.6	4.26	28.800	30.316	24.067	1461.8
16.6	19.3	0.43	26.213	30.825	24.746	1445.8
20.5	24.3	-1.26	25.717	31.909	25.680	1439.4
30.0	29.8	-1.66	25.930	32.634	26.277	1438.6
35.7	35.5	-1.66	25.032	32.835	26.277	1436.7
41.6	41.3	-1.66	25.935	32.636	26.278	1436.8
41.8	41.6	-1.66	25.842	32.641	26.282	1436.8

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
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DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.2	3.17	1453.6	23.05	38.88
10.4	3.71	1458.0	23.45	29.45
15.0	4.12	1461.6	24.49	30.81
20.3	-0.57	1444.1	25.12	31.26
25.2	-1.48	1440.6	25.82	32.08
30.1	-1.65	1439.7	26.17	32.51
35.0	-1.66	1439.4	26.23	32.58
40.3	-1.66	1439.3	26.25	32.61
45.1	-1.66	1439.2	26.26	32.62
48.6	-1.66	1439.3	26.31	32.68

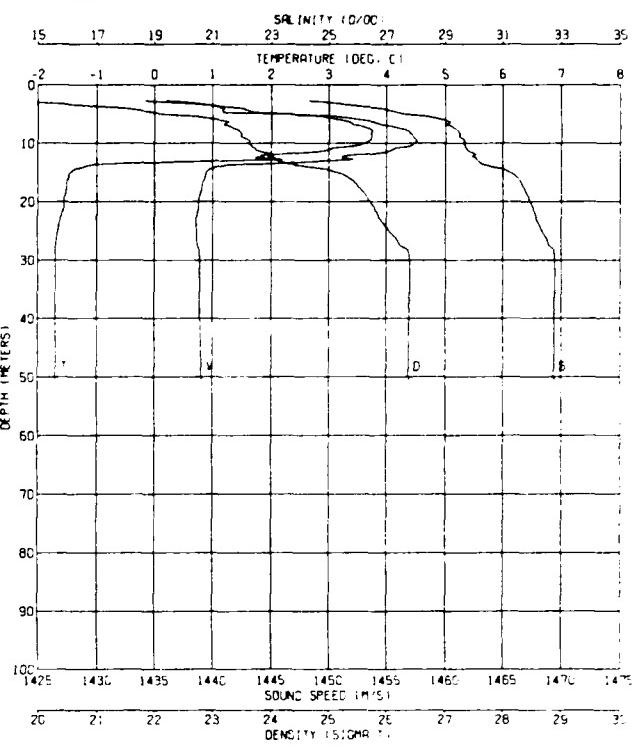
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
146	X		248	0541	Ship	71 17.0	160 47.7
147		X					

146



-2 TEMPERATURE (deg C) 8  
25 SALINITY 35  
20 DENSITY ( $\sigma_t$ ) 30  
1425 SOUND SPEED (m/s) 1475

147



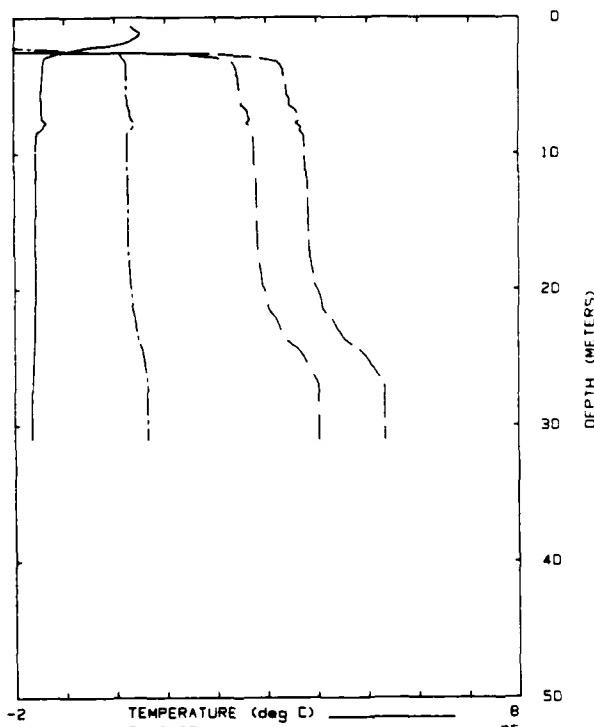
15 17 19 21 23 25 27  
SALINITY (P/PO) 27  
TEMPERATURE (DEG. C) 27  
0 1 2 3 4  
-2 -1 0 1 2 3 4 5 6 7 8  
0 10 20 30 40 50 60 70 80 90 100  
DEPTH (METERS)  
1425 1430 1435 1440 1445 1450 1455 1460 1465 1470 1475  
20 21 22 23 24 25 26 27 28 29 30  
SOUND SPEED (M/S)  
DENSITY ( $\sigma_t$ ) 27  
26 27 28 29 30 31 32 33 34 35  
100  
20 21 22 23 24 25 26 27 28 29 30  
DENSITY ( $\sigma_t$ ) 27

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
1.3	1.3	0.01	5.798	6.112	4.871	1410.6
1.3	1.3	-0.31	8.933	11.010	8.819	1415.6
2.4	2.4	-0.49	22.130	26.403	21.221	1435.3
7.7	7.7	3.75	27.731	28.541	23.500	1458.6
12.9	12.9	3.01	27.498	30.887	24.705	1452.9
18.0	17.9	-1.53	25.446	31.829	25.822	1437.9
23.4	23.3	-1.63	25.632	32.194	25.919	1438.0
28.4	28.2	-1.71	25.981	32.759	26.379	1438.5
35.0	34.8	-1.71	25.983	32.758	26.378	1438.6
40.8	40.3	-1.71	25.986	32.759	26.379	1438.7
41.8	41.8	-1.71	25.994	32.766	26.384	1438.7

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (C/00)
5.4	2.88	1450.5	22.70	28.39
10.4	3.52	1457.3	23.67	29.70
15.1	-1.47	1439.4	25.20	31.32
20.4	-1.56	1438.8	25.73	31.97
25.2	-1.66	1438.6	26.06	32.37
30.2	-1.70	1438.9	26.40	32.79
35.1	-1.70	1438.9	26.40	32.78
40.1	-1.70	1438.9	26.39	32.77
45.0	-1.70	1439.0	26.39	32.77
50.0	-1.70	1439.1	26.40	32.78
50.6	-1.70	1439.1	26.40	32.79

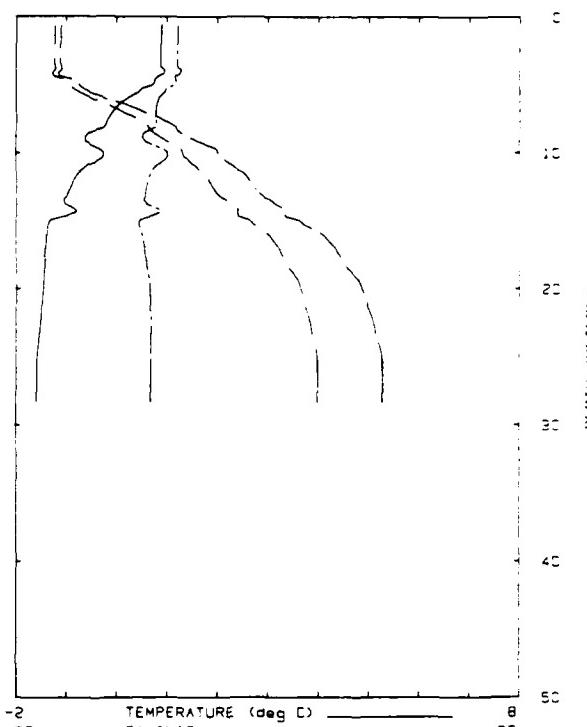
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
148	X		248	1848	Ship	71 50.5	161 13.5
149	X		249	2338	Ship	72 0.0	160 0.0

148



-2	TEMPERATURE (deg C)	8
25	SALINITY	35
20	DENSITY ( $\sigma_t$ )	30
1425	SOUND SPEED (M/S)	1475

149



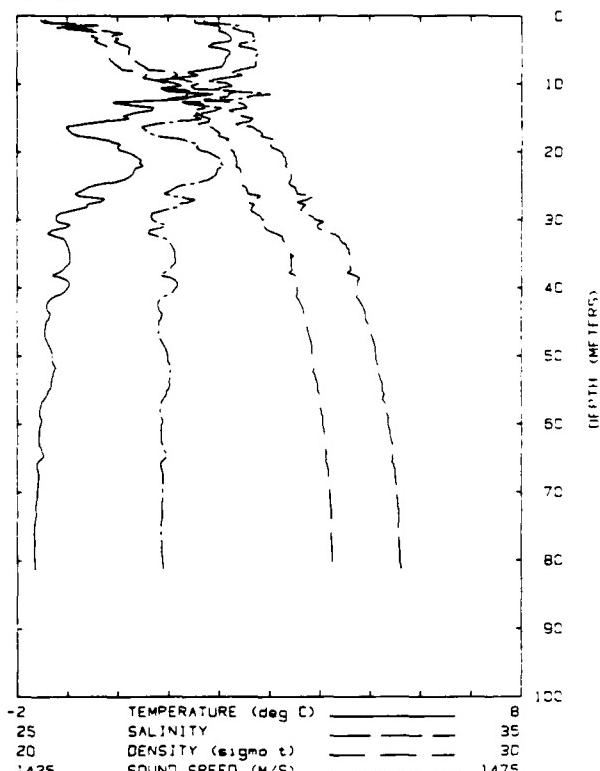
-2	TEMPERATURE (deg C)	8
25	SALINITY	35
20	DENSITY ( $\sigma_t$ )	30
1425	SOUND SPEED (M/S)	1475

PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (M/sec)
2.7	2.7	-1.16	23.626	28.892	23.321	1435.6
8.3	8.3	-1.45	24.856	30.664	24.677	1436.6
13.6	13.5	-1.57	24.879	30.825	24.810	1436.3
18.7	18.6	-1.59	24.742	30.922	24.889	1436.4
24.2	24.0	-1.61	25.275	31.875	25.499	1437.4
30.5	30.3	-1.65	25.733	32.353	26.049	1438.2
31.2	31.0	-1.65	25.736	32.355	26.050	1438.3

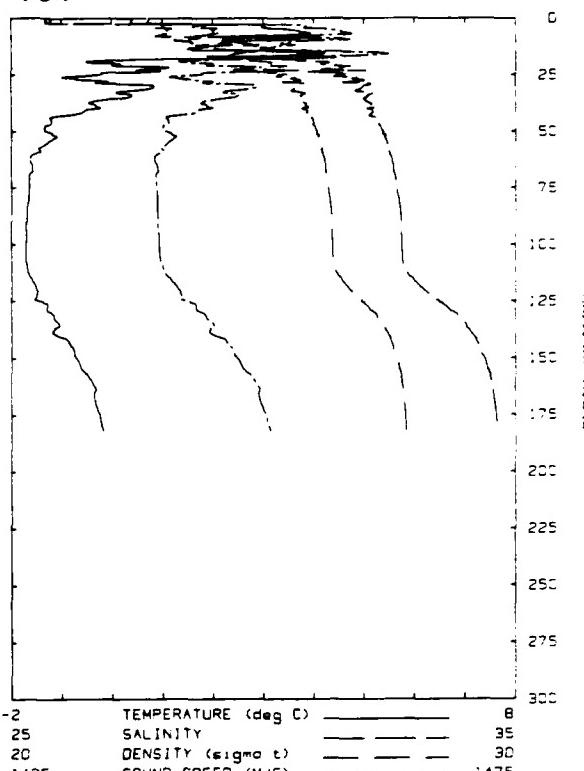
PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (M/sec)
4.7	4.7	0.76	22.785	26.157	20.989	1440.9
10.0	10.0	-0.25	24.305	29.011	23.314	1442.1
15.0	15.0	-1.37	24.971	31.011	24.957	1437.6
22.2	22.1	-1.49	25.648	32.067	25.814	1438.5
28.4	28.2	-1.58	25.736	32.281	25.989	1438.4
28.5	28.3	-1.58	25.738	32.282	25.990	1438.5
28.5	28.3	-1.58	25.739	32.281	25.989	1438.5
27.5	27.3	-1.58	25.735	32.281	25.989	1438.4
25.6	25.5	-1.58	25.733	32.279	25.987	1438.4

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
150	X		249	0429	Ship	72 0.0	156 45.7
151	X		249	0648	Ship	72 0.0	155 25.5

150



151

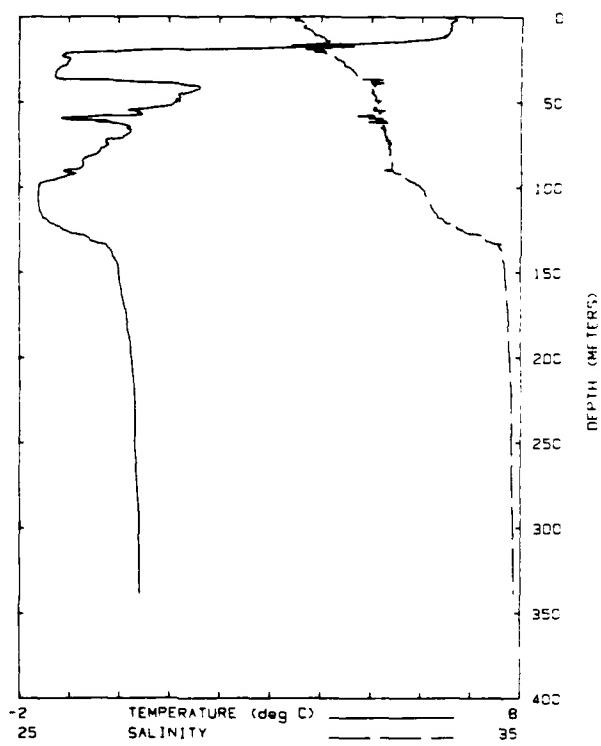


PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
0.5	0.5	1.53	22.810	25.555	20.476	1443.5
6.7	8.7	2.13	24.893	27.342	21.870	1448.7
15.2	15.2	0.23	25.171	28.672	23.829	1443.3
23.8	23.7	0.23	25.760	30.431	24.438	1444.4
32.6	32.5	-1.24	25.381	31.395	25.264	1439.0
41.2	41.0	-1.13	25.700	31.736	25.537	1440.1
49.8	49.5	-1.32	25.625	32.106	25.841	1439.8
58.5	58.2	-1.58	25.804	32.330	26.028	1439.1
67.2	66.8	-1.59	25.813	32.508	26.173	1439.3
75.1	75.8	-1.66	25.810	32.574	26.228	1439.2
81.8	81.3	-1.64	25.858	32.621	26.266	1439.5
81.8	81.3	-1.64	25.959	32.622	26.267	1439.5

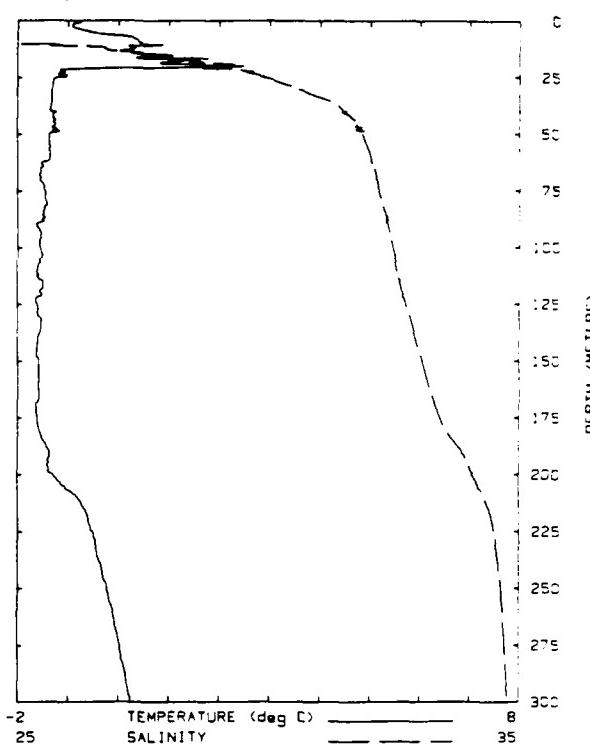
PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
0.8	0.8	0.39	22.248	25.792	20.709	1438.6
3.6	3.6	3.01	26.397	28.627	22.834	1454.2
6.7	8.7	2.38	26.826	29.719	23.748	1452.9
14.0	13.8	1.50	26.524	30.172	24.167	1449.7
19.1	19.0	-0.35	25.842	30.864	24.810	1442.2
24.2	24.1	-0.07	26.239	31.358	25.197	1444.3
28.8	29.6	0.72	27.452	32.119	25.771	1449.0
35.0	34.8	0.34	27.107	32.086	25.748	1447.3
40.4	40.2	-0.39	26.542	32.083	25.793	1444.0
45.7	45.5	-1.20	26.060	32.301	25.986	1440.6
51.1	50.8	-1.19	26.143	32.397	26.073	1440.8
56.4	56.1	-1.35	26.071	32.469	26.136	1440.3
62.0	61.6	-1.61	25.933	32.563	26.218	1439.2
67.4	67.0	-1.57	25.892	32.599	26.246	1439.6
72.9	72.5	-1.64	25.974	32.648	26.287	1439.4
78.3	77.8	-1.65	25.880	32.675	26.309	1439.5
83.8	83.3	-1.68	26.000	32.720	26.347	1439.5
89.3	88.7	-1.69	26.008	32.740	26.363	1439.5
94.7	94.1	-1.70	26.020	32.756	26.376	1439.6
100.1	99.5	-1.70	26.020	32.762	26.381	1439.7
105.6	104.9	-1.71	26.022	32.769	26.387	1439.7
111.4	110.6	-1.68	26.092	32.826	26.433	1440.1
118.0	118.1	-1.57	26.310	33.009	26.578	1440.9
122.4	121.6	-1.49	26.585	33.292	26.806	1441.8
127.9	127.0	-1.27	27.018	33.837	27.079	1443.4
133.5	132.6	-1.14	27.330	33.918	27.302	1444.4
139.1	138.1	-1.17	27.455	34.118	27.465	1444.6
144.6	143.5	-0.83	27.885	34.282	27.585	1445.8
149.0	146.8	-0.74	28.002	34.385	27.648	1447.2
155.5	154.4	-0.82	28.185	34.443	27.707	1447.9
160.0	159.7	-0.41	28.410	34.528	27.766	1449.1
166.2	165.0	-0.34	28.485	34.562	27.780	1449.6
171.5	170.2	-0.32	28.535	34.592	27.814	1449.8
176.8	175.5	-0.24	28.628	34.618	27.829	1450.3
182.3	180.9	-0.18	28.693	34.641	27.846	1450.6
183.1	181.7	-0.17	28.704	34.640	27.845	1450.7
183.1	181.7	-0.17	28.708	34.643	27.848	1450.7

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
152	X		249	0904	Ship	71 59.8	154 4.6
153	X		249	1158	Ship	71 59.2	152 48.5

152



153



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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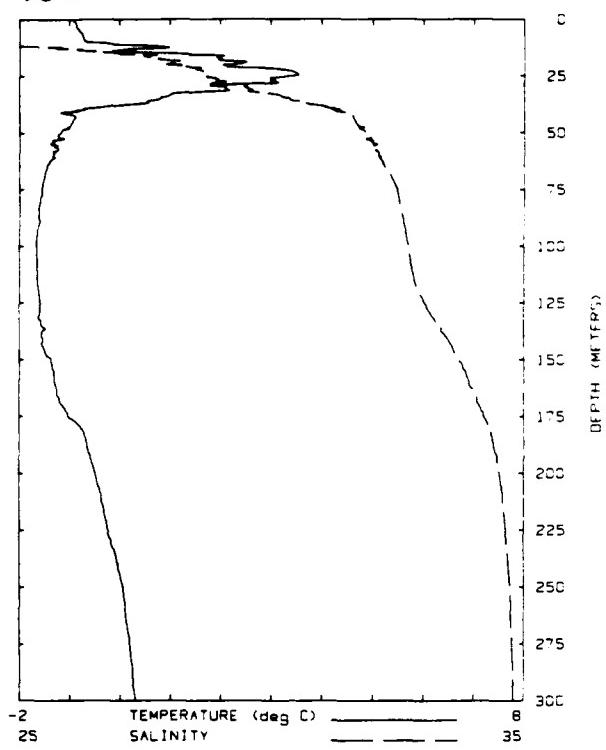
-0.1	-0.1	8.37	30.584	30.423	23.922	1470.4
5.3	5.2	8.81	31.084	30.761	24.159	1471.8
10.6	10.6	8.54	31.128	30.889	24.253	1471.8
15.8	15.8	4.93	30.003	31.081	24.605	1465.6
21.0	20.9	-0.24	25.736	30.873	24.813	1442.8
26.3	26.1	-0.98	25.577	31.435	25.290	1440.1
31.6	31.5	-1.24	25.536	31.835	25.459	1439.3
37.0	36.8	-1.10	26.010	32.128	25.853	1445.7
42.4	42.2	1.63	26.134	32.049	25.659	1453.2
47.6	47.5	1.22	27.644	32.094	25.722	1451.5
52.8	52.0	0.95	27.662	32.143	25.777	1450.4
58.1	58.0	0.31	26.841	31.740	25.487	1447.1
63.3	63.3	0.09	27.070	32.269	25.923	1446.8
68.6	68.6	0.21	27.186	32.285	25.930	1447.5
74.3	73.9	-0.25	26.878	32.362	26.012	1445.6
79.5	79.0	-0.37	26.793	32.379	26.031	1445.1
84.8	84.2	-0.73	26.532	32.404	26.065	1443.6
90.0	89.4	-0.78	26.483	32.409	26.071	1443.3
95.1	94.5	-1.15	26.411	32.697	28.315	1442.1
100.2	98.6	-1.58	26.284	32.994	26.566	1440.6
105.4	104.7	-1.81	26.342	33.096	26.650	1440.7
110.5	108.8	-1.60	26.418	33.184	26.729	1440.9
115.7	114.9	-1.58	26.515	33.295	26.810	1441.2
120.8	120.0	-1.42	26.785	33.486	26.960	1442.3
126.0	125.2	-1.10	27.290	33.823	27.224	1444.4
131.2	130.3	-0.58	28.055	34.280	27.574	1447.5
136.3	135.4	-0.23	28.573	34.563	27.786	1449.6
141.5	140.5	-0.12	28.720	34.832	27.836	1450.3
146.7	145.6	-0.01	28.054	34.882	27.871	1450.9
151.8	150.0	0.00	28.877	34.882	27.876	1451.1
157.1	155.9	0.02	28.898	34.702	27.885	1451.2
162.1	161.0	0.05	28.940	34.715	27.894	1451.5
167.3	166.0	0.08	28.881	34.732	27.908	1451.7
172.5	171.2	0.11	28.027	34.751	27.920	1452.0
177.8	176.5	0.15	28.056	34.749	27.916	1452.2
183.1	181.8	0.17	28.083	34.757	27.921	1452.4
188.3	187.1	0.20	28.128	34.774	27.934	1452.7
194.0	182.5	0.23	28.153	34.774	27.832	1452.9
199.4	187.0	0.24	28.184	34.778	27.835	1453.0
205.0	203.4	0.26	29.182	34.788	27.839	1453.2
210.5	208.0	0.27	29.208	34.780	27.942	1453.4
216.0	214.3	0.28	29.237	34.801	27.950	1453.6
221.3	219.6	0.30	29.252	34.810	27.957	1453.7
227.0	225.2	0.32	29.245	34.821	27.964	1453.8
232.8	230.0	0.32	29.286	34.821	27.984	1454.0
238.6	236.7	0.32	29.285	34.819	27.983	1454.1
244.4	242.4	0.32	29.288	34.819	27.983	1454.2
249.7	247.7	0.32	29.294	34.823	27.984	1454.3
255.4	253.3	0.32	29.286	34.820	27.984	1454.4
261.1	258.0	0.34	28.318	34.828	27.989	1454.6
266.7	264.5	0.35	29.329	34.830	27.970	1454.7
272.6	270.3	0.36	29.348	34.830	27.977	1454.8
278.5	276.2	0.37	29.358	34.835	27.973	1455.0
284.2	281.8	0.37	29.387	34.837	27.975	1455.1
289.8	287.3	0.38	29.387	34.841	27.977	1455.3
295.2	292.7	0.40	29.399	34.845	27.978	1455.4
301.0	298.4	0.40	29.402	34.846	27.980	1455.5
306.7	304.0	0.39	29.403	34.851	27.985	1455.6

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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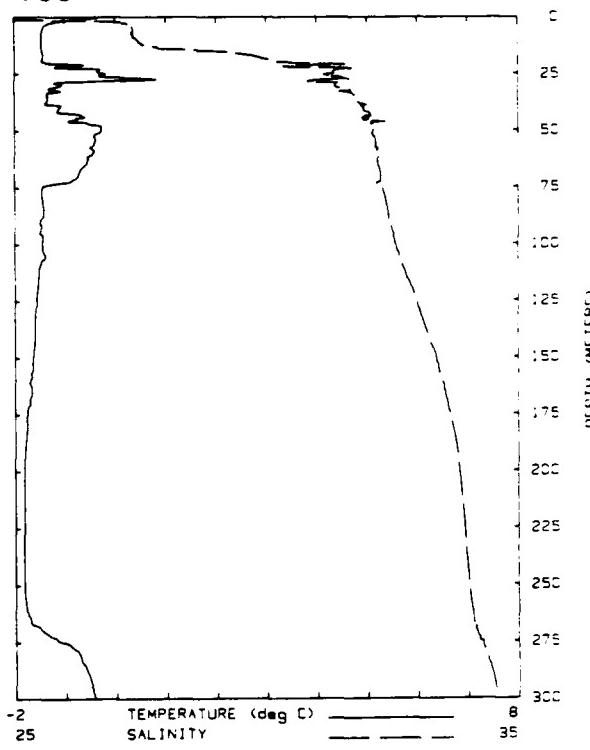
0.8	0.8	-0.81	18.253	18.058	15.304	1423.9
1.8	1.8	-0.81	17.513	20.740	16.660	1425.7
7.8	7.7	0.30	21.419	24.812	19.924	1437.0
13.1	13.1	0.29	22.987	26.812	21.530	1439.7
18.7	18.6	1.06	24.795	28.411	22.781	1445.5
24.4	24.3	-1.00	24.425	29.893	24.045	1447.9
31.1	30.9	-1.31	24.776	30.872	24.582	1437.6
37.8	37.6	-1.33	25.270	31.364	25.242	1438.6
43.5	43.3	-1.27	25.530	31.651	25.472	1439.3
50.2	49.8	-1.38	25.806	31.845	25.631	1439.3
56.9	56.6	-1.37	25.883	31.959	25.724	1439.5
63.6	63.2	-1.52	25.636	32.553	25.803	1439.0
70.0	69.6	-1.54	25.867	32.118	25.856	1429.1
75.5	75.0	-1.44	25.787	32.181	25.905	1439.7
81.2	80.7	-1.41	25.883	32.259	25.987	1442.1
86.8	86.2	-1.49	25.889	32.352	26.044	1439.9
92.4	91.8	-1.58	25.842	32.379	26.068	1439.6
98.0	97.4	-1.56	25.895	32.435	26.113	1439.9
103.5	102.9	-1.51	25.882	32.496	26.162	1440.3
109.1	108.4	-1.58	25.957	32.536	26.195	1440.1
114.7	113.9	-1.57	26.025	32.808	26.253	1440.3
120.4	119.6	-1.56	26.075	32.661	26.296	1441.6
126.0	125.2	-1.80	26.085	32.726	26.350	1440.5
131.5	130.6	-1.56	26.184	32.808	26.415	1440.9
137.0	136.1	-1.54	26.247	32.875	26.459	1441.2
142.6	141.6	-1.80	26.249	32.937	26.520	1441.1
148.1	147.0	-1.62	26.295	33.015	26.584	1441.2
153.8	152.5	-1.58	26.379	33.085	26.641	1441.6
159.4	158.2	-1.58	26.430	33.151	26.694	1441.7
165.2	164.0	-1.58	26.491	33.232	26.759	1441.9
171.1	169.8	-1.63	26.521	33.324	26.835	1441.9
176.8	175.4	-1.80	26.613	33.422	26.914	1442.3
182.4	181.0	-1.56	26.747	33.554	27.020	1442.7
188.1	186.6	-1.43	26.900	33.748	27.174	1443.7
193.7	192.2	-1.37	27.167	33.911	27.303	1444.3
199.3	197.7	-1.39	27.238	34.021	27.393	1444.5
205.0	203.4	-1.13	27.538	34.144	27.485	1445.9
210.7	209.0	-0.94	27.886	34.280	27.584	1447.6
216.8	215.1	-0.87	28.127	34.407	27.670	1448.7
223.0	221.3	-0.58	28.248	34.464	27.722	1449.3
228.8	227.1	-0.49	28.356	34.513	27.750	1449.8
234.9	233.1	-0.43	28.446	34.559	27.792	1450.2
241.0	239.1	-0.34	28.548	34.580	27.813	1450.8
248.5	244.5	-0.30	28.598	34.607	27.824	1451.1
252.1	250.0	-0.23	28.603	34.632	27.841	1451.6
257.0	255.7	-0.17	28.760	34.864	27.864	1452.0
263.3	261.1	-0.08	28.844	34.880	27.873	1452.5
268.6	266.4	-0.05	28.887	34.883	27.882	1452.7
274.0	271.7	0.01	28.932	34.708	27.891	1453.1
278.6	277.2	0.05	28.985	34.720	27.898	1453.4
285.0	282.6	0.10	29.051	34.732	27.905	1453.7
288.7	286.4	0.20	29.169	34.782	27.923	1454.4
294.7	292.4	0.20	29.226	34.777	27.933	1454.8
300.7	298.7	0.30	29.277	34.791	27.942	1455.1
306.7	304.1	0.33	29.315	34.801	27.948	1455.4
312.1	310.3	0.33	29.389	34.814	27.857	1455.8
318.1	316.3	0.33	29.385	34.819	27.860	1456.0

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
154	X		249	1653	Ship	72	0.4
155	X		249	2341	Ship	72	0.1

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PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOND VELOCITY (m/sec)
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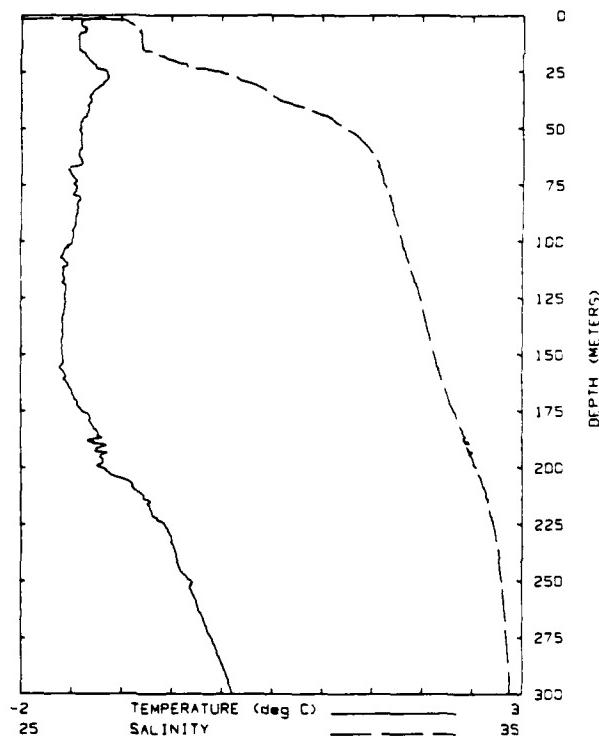
0.4	0.4	-0.90	15.896	18.408	14.778	1422.6
0.4	0.4	-0.90	15.590	18.271	14.868	1422.4
0.3	0.3	-0.90	15.551	18.220	14.627	1422.4
0.5	0.5	-0.90	15.452	18.094	14.526	1422.2
0.5	0.5	-0.89	15.451	18.091	14.523	1422.2
4.2	4.2	-0.84	18.443	21.885	17.584	1427.6
9.0	9.0	-0.70	18.700	22.110	17.765	1428.7
14.5	14.4	-0.05	22.553	26.465	21.258	1438.1
19.5	19.4	2.46	25.500	28.029	22.396	1451.2
24.5	24.4	3.54	26.874	28.715	22.463	1456.9
29.4	29.3	1.80	26.087	28.337	23.481	1450.2
34.4	34.2	0.96	26.155	30.221	24.236	1447.6
39.3	39.1	-0.45	25.756	31.109	25.010	1442.4
45.2	45.0	-0.94	25.787	31.849	25.461	1442.9
50.4	50.1	-1.18	25.754	31.856	25.635	1442.2
56.3	56.0	-1.30	25.774	32.007	25.760	1439.9
62.3	61.9	-1.35	25.849	32.180	25.885	1439.9
68.4	68.0	-1.49	25.872	32.337	26.032	1439.6
74.3	73.9	-1.54	25.916	32.451	26.126	1439.6
79.0	78.1	-1.50	25.830	32.519	26.181	1439.6
85.6	85.0	-1.61	25.850	32.571	26.225	1439.6
91.6	91.0	-1.62	25.881	32.621	26.265	1439.7
97.6	97.0	-1.65	26.005	32.682	26.315	1439.8
103.6	103.0	-1.85	26.040	32.725	26.350	1439.9
108.7	108.0	-1.64	26.073	32.758	26.376	1440.1
114.0	113.2	-1.84	26.111	32.806	26.417	1440.3
119.0	118.2	-1.83	26.181	32.860	26.459	1440.5
124.2	123.3	-1.80	26.281	32.987	26.561	1440.9
128.4	128.5	-1.58	26.378	33.106	26.657	1441.2
134.5	133.6	-1.57	26.504	33.280	26.782	1441.5
139.6	138.6	-1.55	26.643	33.423	26.913	1441.9
144.6	143.8	-1.54	26.753	33.568	27.031	1442.2
149.9	148.9	-1.42	26.853	33.686	27.131	1443.1
155.0	153.9	-1.34	27.083	33.792	27.206	1443.7
160.1	159.0	-1.30	27.182	33.892	27.285	1444.1
165.1	163.9	-1.25	27.322	34.004	27.375	1444.6
170.2	169.0	-1.19	27.428	34.079	27.434	1445.0
175.4	174.1	-1.03	27.640	34.180	27.516	1446.0
180.5	179.2	-0.80	27.918	34.300	27.599	1447.3
185.6	184.2	-0.68	28.088	34.368	27.649	1448.0
190.0	189.4	-0.64	28.137	34.408	27.677	1448.4
196.1	194.6	-0.55	28.263	34.478	27.730	1448.9
201.0	199.0	-0.48	28.352	34.514	27.758	1449.4
206.8	205.0	-0.44	28.414	34.540	27.777	1449.7
211.9	210.2	-0.37	28.500	34.573	27.801	1450.2
217.2	215.5	-0.32	28.581	34.587	27.817	1450.5
222.6	221.1	-0.27	28.620	34.617	27.832	1450.9
228.1	226.3	-0.23	28.666	34.634	27.843	1451.1
233.7	231.0	-0.18	28.754	34.657	27.856	1451.6
238.4	237.5	-0.07	28.850	34.682	27.874	1452.2
243.3	243.3	-0.02	28.910	34.700	27.885	1452.5
251.3	249.2	0.05	28.981	34.725	27.902	1453.0
257.4	255.2	0.08	28.024	34.732	27.906	1453.2
263.3	261.1	0.12	28.062	34.740	27.911	1453.5
269.5	267.3	0.15	28.108	34.759	27.924	1453.7
275.6	273.3	0.19	28.152	34.765	27.928	1454.0
281.8	279.4	0.22	28.180	34.770	27.930	1454.3
287.6	285.1	0.24	28.212	34.780	27.936	1454.5
293.9	291.3	0.26	28.230	34.763	27.937	1454.7
300.1	297.5	0.30	28.277	34.787	27.947	1455.0
308.7	304.0	0.32	28.308	34.802	27.949	1455.2

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOND VELOCITY: M sec
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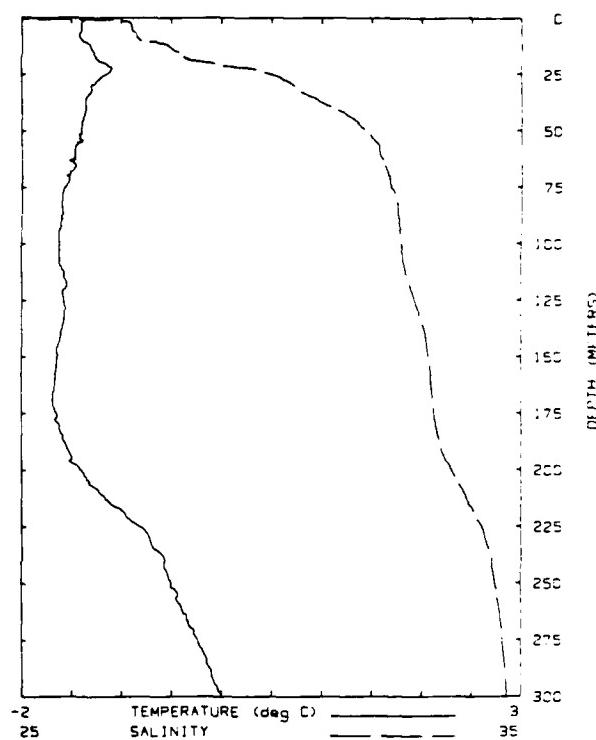
0.5	0.5	-0.33	6.308	6.766	5.385	1419.8
0.6	0.6	-0.37	18.011	21.003	16.873	1428.6
6.8	6.8	-1.44	22.217	27.359	22.005	1432.1
12.6	12.5	-1.46	22.347	27.549	22.158	1432.4
18.1	18.0	-1.43	24.082	29.878	24.041	1435.8
23.2	23.1	-0.32	26.183	31.549	25.36C	1443.4
28.4	28.3	0.06	26.022	30.927	24.853	1444.4
34.4	34.2	-1.34	25.520	31.720	25.529	1438.6
40.5	40.3	-1.10	25.856	31.914	25.68C	1442.6
46.3	46.0	-0.93	26.066	32.014	25.756	1441.5
51.4	51.1	-0.31	26.619	32.101	25.805	1444.6
56.7	56.3	-0.42	26.589	32.168	25.863	1444.4
61.7	61.3	-0.52	26.515	32.180	25.877	1443.8
67.0	66.6	-0.65	26.466	32.250	25.938	1443.4
72.5	72.0	-0.85	26.329	32.271	25.961	1442.6
77.7	77.2	-1.46	25.892	32.331	26.026	1439.6
83.3	82.8	-1.44	25.957	32.394	26.077	1442.2
89.4	88.6	-1.45	25.974	32.428	26.105	1442.2
95.3	94.7	-1.48	26.002	32.505	26.168	1442.2
101.4	100.7	-1.45	26.095	32.580	26.228	1442.7
106.8	106.1	-1.39	26.189	32.646	26.280	1442.1
113.0	112.2	-1.51	26.176	32.758	26.375	1442.8
119.0	118.2	-1.54	26.241	32.870	26.465	1442.9
125.3	124.4	-1.57	26.282	32.961	26.539	1442.0
131.2	130.3	-1.59	26.346	33.762	26.622	1441.1
136.8	135.8	-1.59	26.406	33.150	26.693	1441.3
143.1	142.1	-1.60	26.467	33.241	26.767	1441.5
149.3	148.3	-1.63	26.532	33.354	26.859	1441.6
155.6	154.5	-1.64	26.569	33.416	26.910	1442.2
161.4	160.3	-1.70	26.572	33.482	26.985	1441.6
167.6	166.4	-1.68	26.652	33.580	27.027	1442.0
174.2	172.8	-1.75	26.637	33.622	27.080	1441.8
180.8	179.5	-1.76	28.886	33.893	27.137	1442.2
187.5	186.1	-1.78	26.712	33.756	27.189	1442.0
193.2	191.7	-1.80	26.727	33.785	27.221	1442.1
200.0	198.4	-1.82	26.747	33.834	27.253	1442.2
206.7	205.1	-1.82	26.769	33.864	27.277	1442.3
213.8	212.1	-1.82	26.792	33.892	27.300	1442.5
221.1	219.4	-1.82	26.813	33.920	27.323	1442.6
227.3	225.5	-1.82	26.830	33.938	27.337	1442.7
235.0	233.1	-1.82	26.854	33.885	27.359	1442.9
242.6	240.7	-1.82	26.878	33.888	27.386	1443.0
248.1	247.1	-1.83	26.893	34.017	27.402	1443.2
255.2	253.1	-1.82	26.916	34.038	27.418	1443.3
261.1	259.8	-1.79	26.965	34.088	27.442	1443.6
268.8	266.6	-1.70	27.073	34.109	27.473	1444.2
275.7	270.4	-1.41	27.383	34.182	27.524	1445.7
278.7	277.3	-0.86	27.833	34.328	27.623	1448.8
286.4	284.0	-0.87	28.170	34.425	27.694	1449.8
293.3	290.7	-0.52	28.358	34.508	27.755	1451.2
299.8	297.2	-0.45	28.465	34.582	27.795	1451.2
309.4	308.7	-0.29	28.857	34.629	27.842	1452.5
319.9	317.1	-0.16	28.804	34.674	27.872	1453.0
329.8	326.9	-0.01	28.864	34.715	27.897	1453.5
339.7	336.7	0.12	29.111	34.754	27.922	1454.2
345.9	342.8	0.20	29.189	34.767	27.928	1455.2
345.7	342.6	0.20	29.188	34.766	27.927	1455.2

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
156	X		250	0731	Ship	72 0.1	148 44.6
157	X		250	1840	Ship	71 50.0	148 43.5

156



157

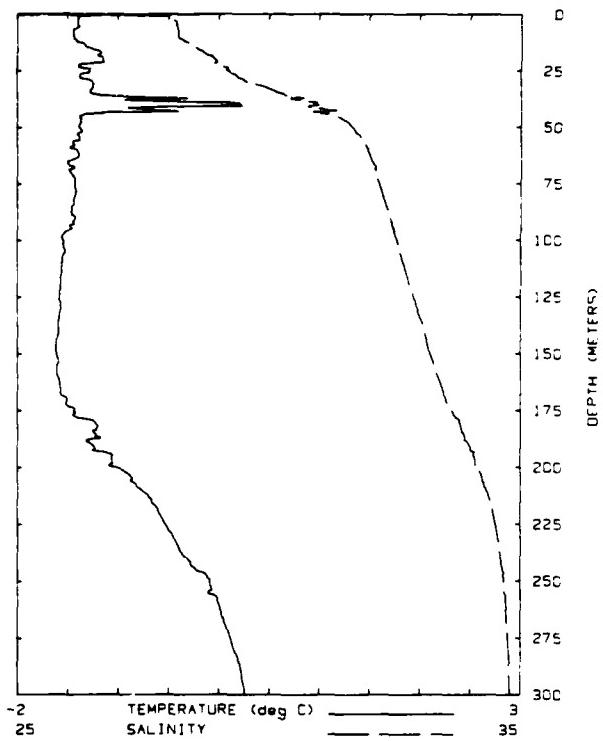


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ ('M/sec)
1.4	1.4	-1.21	23.798	23.940	19.241	1428.5
1.3	1.3	-1.22	19.632	23.723	19.057	1428.2
4.9	4.9	-1.40	22.169	27.251	21.917	1432.2
10.5	10.4	-1.43	22.262	27.401	22.038	1432.3
16.0	16.0	-1.41	22.380	27.539	22.150	1432.7
21.5	21.4	-1.28	22.961	28.195	22.680	1434.3
27.1	26.9	-1.13	23.853	29.245	23.525	1436.5
32.6	32.5	-1.74	24.203	29.829	23.988	1436.8
38.2	38.0	-1.30	24.434	30.182	24.293	1437.2
43.6	43.3	-1.34	24.938	30.917	24.380	1438.0
49.1	48.8	-1.40	25.229	31.382	25.257	1438.4
54.7	54.3	-1.40	25.505	31.750	25.555	1439.0
60.2	58.9	-1.42	25.855	31.970	25.733	1439.3
65.9	65.5	-1.39	25.789	32.123	25.857	1439.8
71.4	71.0	-1.50	25.763	32.197	25.919	1439.4
76.9	76.4	-1.45	25.870	32.286	25.990	1439.9
82.2	81.7	-1.41	25.963	32.370	26.057	1440.3
87.5	87.0	-1.44	25.992	32.436	26.111	1440.3
93.0	92.4	-1.46	26.030	32.506	26.168	1440.4
98.5	97.9	-1.48	26.068	32.577	26.226	1440.5
103.9	103.2	-1.56	26.060	32.650	26.287	1440.3
109.5	108.7	-1.56	26.117	32.734	26.356	1440.5
115.0	114.2	-1.58	26.159	32.808	26.416	1440.6
120.4	119.6	-1.55	26.250	32.900	26.490	1440.9
125.9	125.1	-1.56	26.292	32.965	26.543	1441.0
131.6	130.7	-1.57	26.338	33.031	26.596	1441.2
137.0	136.1	-1.59	26.366	33.086	26.641	1441.3
142.6	141.8	-1.58	26.413	33.146	26.690	1441.4
158.3	155.1	-1.80	26.518	33.303	26.817	1441.8
164.0	160.4	-1.56	26.611	33.382	26.881	1442.2
169.8	165.7	-1.49	26.740	33.480	26.958	1442.7
175.2	171.1	-1.43	26.848	33.556	27.018	1443.2
177.8	176.5	-1.32	27.028	33.676	27.112	1444.0
183.2	182.0	-1.28	27.123	33.788	27.185	1444.4
189.0	187.5	-1.30	27.171	33.839	27.243	1444.5
194.5	193.0	-1.18	27.401	34.012	27.379	1445.4
200.2	198.6	-1.22	27.382	34.036	27.402	1445.3
205.9	204.3	-1.01	27.860	34.176	27.506	1446.5
211.7	210.0	-0.85	27.872	34.274	27.579	1447.5
217.2	215.5	-0.73	28.008	34.316	27.808	1448.3
223.4	221.6	-0.67	28.123	34.403	27.876	1448.7
229.2	227.4	-0.54	28.278	34.455	27.713	1449.5
234.8	232.7	-0.51	28.330	34.480	27.738	1449.8
239.9	237.9	-0.46	28.408	34.533	27.772	1450.2
245.1	243.1	-0.42	28.459	34.559	27.782	1450.4
250.4	248.4	-0.34	28.551	34.584	27.808	1451.0
255.9	253.7	-0.30	28.810	34.615	27.831	1451.3
261.1	258.9	-0.25	28.868	34.626	27.840	1451.6
266.4	264.2	-0.21	28.721	34.650	27.855	1451.9
271.9	269.6	-0.15	28.785	34.671	27.889	1452.3
277.3	275.0	-0.08	28.852	34.690	27.881	1452.7
283.1	280.7	-0.05	28.803	34.702	27.888	1453.0
288.0	286.4	0.00	28.862	34.721	27.902	1453.3
294.7	292.2	0.05	28.020	34.737	27.911	1452.7
300.2	297.6	0.08	28.083	34.748	27.918	1454.0
305.8	303.2	0.14	28.113	34.758	27.924	1454.3

PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ ('M/sec)
0.8	0.8	-1.17	19.339	23.303	18.727	1427.9
2.7	2.7	-1.40	22.122	27.195	21.871	1432.0
6.9	6.9	-1.40	22.258	27.369	22.012	1432.4
16.4	16.3	-1.27	22.958	28.189	22.673	1434.2
22.5	22.4	-1.09	24.101	29.550	23.770	1437.0
28.6	28.4	-1.25	24.574	30.345	24.416	1437.4
34.9	34.7	-1.33	24.822	30.759	24.752	1437.7
41.1	40.9	-1.36	25.185	31.291	25.183	1438.4
47.2	46.9	-1.39	25.498	31.736	25.543	1438.9
53.0	52.7	-1.41	25.666	31.987	25.747	1439.3
57.0	56.7	-1.45	25.754	32.143	25.875	1439.4
65.8	65.4	-1.45	25.842	32.262	25.970	1439.6
70.3	69.9	-1.55	25.826	32.344	26.039	1439.4
75.9	75.4	-1.57	25.860	32.413	26.096	1439.4
81.1	80.6	-1.59	25.800	32.485	26.155	1439.5
86.3	87.7	-1.60	25.829	32.529	26.190	1439.7
93.9	93.3	-1.62	25.844	32.564	26.219	1439.7
99.0	98.4	-1.62	25.967	32.596	26.245	1439.8
104.3	103.6	-1.62	25.988	32.618	26.263	1440.0
110.9	110.2	-1.60	26.038	32.683	26.299	1440.2
117.0	116.2	-1.55	26.132	32.740	26.360	1440.6
123.4	122.6	-1.59	26.170	32.828	26.433	1440.7
129.1	128.2	-1.56	26.255	32.911	26.498	1441.0
134.9	134.0	-1.58	26.316	33.007	26.577	1441.2
141.3	140.3	-1.60	26.348	33.080	26.636	1441.2
147.5	146.5	-1.64	26.357	33.124	26.673	1441.2
153.7	152.6	-1.65	26.376	33.158	26.701	1441.3
159.6	158.4	-1.65	26.387	33.190	26.727	1441.4
165.4	164.2	-1.67	26.406	33.214	26.747	1441.5
171.8	170.5	-1.68	26.412	33.236	26.765	1441.6
178.2	176.9	-1.64	26.462	33.257	26.781	1441.9
185.0	183.6	-1.60	26.540	33.318	26.830	1442.2
191.4	190.0	-1.54	26.649	33.392	26.888	1442.8
197.8	196.3	-1.51	26.775	33.533	27.001	1443.2
204.8	203.2	-1.35	27.026	33.889	27.123	1444.3
212.0	210.3	-1.21	27.274	33.886	27.262	1445.3
218.2	218.5	-1.03	27.541	34.027	27.386	1445.6
224.1	222.3	-0.80	27.740	34.146	27.478	1447.3
220.8	220.0	-0.74	27.870	34.266	27.568	1448.4
236.3	234.4	-0.68	28.085	34.349	27.633	1448.6
242.2	240.2	-0.58	28.233	34.418	27.884	1449.6
247.7	245.7	-0.53	28.298	34.460	27.716	1449.9
253.4	251.3	-0.50	28.351	34.484	27.743	1450.1
259.0	258.0	-0.44	28.428	34.533	27.772	1450.5
264.4	262.2	-0.38	28.508	34.571	27.799	1450.9
270.0	267.7	-0.33	28.579	34.599	27.819	1451.3
275.7	273.4	-0.25	28.675	34.633	27.843	1451.6
281.8	279.2	-0.18	28.748	34.649	27.853	1452.3
287.7	285.3	-0.14	28.808	34.678	27.874	1452.6
293.8	291.1	-0.09	28.861	34.691	27.882	1452.9
299.6	287.0	-0.02	28.936	34.710	27.894	1453.4
305.2	302.5	0.04	28.005	34.730	27.907	1453.8
310.6	307.9	0.09	28.081	34.743	27.915	1454.1
315.9	313.2	0.13	28.108	34.755	27.922	1454.4
322.1	319.2	0.18	28.178	34.771	27.932	1454.6
328.2	325.3	0.22	28.211	34.779	27.937	1455.0

Station Number	ASL Cast	APL Cast	Julian Day	GMT hmmm	Platform	Latitude	Longitude
158	X		251	0149	Ship	71 30.3	148 43.7
159		X	251	1140	Ship	71 29.6	150 2.7

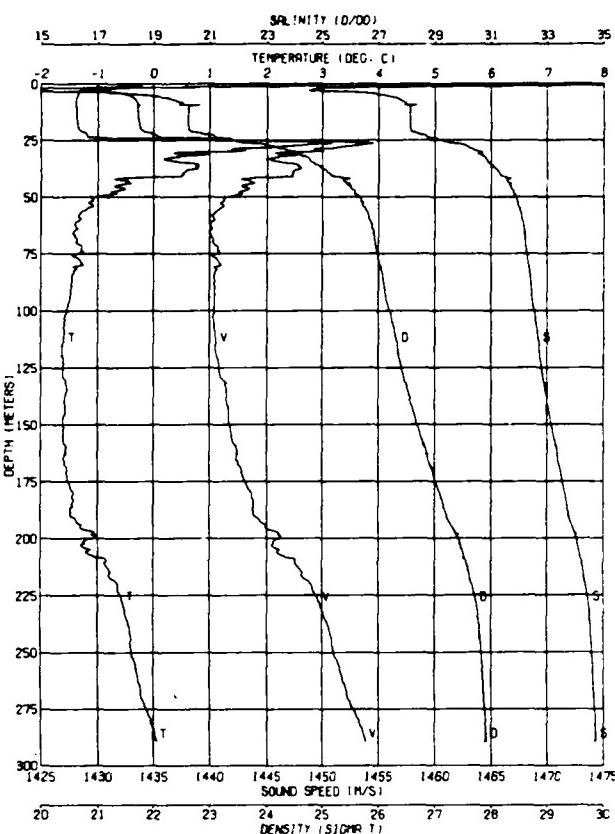
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PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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0.3	0.3	-0.15	3.156	3.214	2.512	1406.0
6.1	6.1	-1.40	22.848	24.165	22.655	1433.4
14.4	14.3	-1.32	23.135	28.479	22.909	1434.3
22.6	22.7	-1.39	23.508	29.044	23.366	1434.9
31.3	31.2	-1.24	24.124	29.718	23.908	1436.7
39.8	39.6	0.21	26.116	30.902	24.818	1445.2
49.1	47.9	-1.37	25.396	31.571	25.409	1438.8
56.7	56.4	-1.45	25.571	31.888	25.668	1439.0
65.3	64.9	-1.47	25.668	32.044	25.794	1439.3
74.0	73.5	-1.43	25.808	32.182	25.905	1439.8
82.6	82.1	-1.44	25.887	32.300	26.001	1440.0
91.3	90.8	-1.43	25.990	32.421	26.099	1440.4
100.1	99.5	-1.56	25.986	32.551	26.207	1440.1
108.9	108.1	-1.55	26.070	32.658	26.293	1440.4
117.6	116.8	-1.57	26.137	32.766	26.382	1441.6
126.4	125.5	-1.58	26.229	32.896	26.487	1441.9
135.2	134.3	-1.59	26.313	33.014	26.583	1441.1
144.1	143.1	-1.60	26.392	33.133	26.680	1441.4
153.0	151.8	-1.59	26.484	33.258	26.781	1441.7
161.8	160.7	-1.59	26.588	33.381	26.880	1442.0
170.6	169.5	-1.51	26.785	33.529	26.988	1442.8
179.4	178.4	-1.38	27.045	33.765	27.186	1443.8
188.5	187.0	-1.17	27.355	33.943	27.323	1445.2
197.5	196.0	-1.06	27.561	34.099	27.445	1446.1
206.4	204.8	-0.85	27.850	34.250	27.560	1447.4
215.5	213.8	-0.88	28.102	34.391	27.667	1448.5
224.9	223.1	-0.55	28.289	34.491	27.742	1449.4
234.3	232.4	-0.43	28.458	34.589	27.800	1450.3
243.4	241.4	-0.28	28.628	34.624	27.837	1451.2
252.6	250.5	-0.09	28.835	34.877	27.870	1452.3
262.0	260.0	-0.00	28.943	34.716	27.897	1452.9
271.9	269.8	0.07	29.030	34.742	27.915	1453.4
281.7	279.3	0.15	29.114	34.782	27.927	1453.9
291.5	289.0	0.23	29.202	34.783	27.939	1454.5
300.9	288.3	0.25	29.241	34.787	27.949	1454.8
310.8	307.8	0.28	29.272	34.808	27.955	1455.1
327.1	324.2	0.33	29.338	34.818	27.982	1455.6
344.4	341.3	0.38	29.371	34.828	27.986	1456.0
361.8	359.3	0.36	29.387	34.838	27.974	1456.3
379.1	375.8	0.37	29.413	34.843	27.979	1456.6
386.7	383.0	0.40	29.446	34.851	27.984	1457.0
414.8	410.8	0.41	29.489	34.858	27.980	1457.4
433.0	428.0	0.42	29.487	34.886	27.985	1457.8
450.7	446.4	0.43	29.516	34.873	28.000	1458.1
468.2	463.7	0.43	29.532	34.876	28.004	1458.4
485.2	480.5	0.44	29.547	34.882	28.007	1458.7
502.8	497.8	0.44	29.580	34.886	28.010	1459.0
520.3	515.1	0.45	29.575	34.881	28.013	1459.3
538.3	532.0	0.45	29.587	34.885	28.017	1459.6

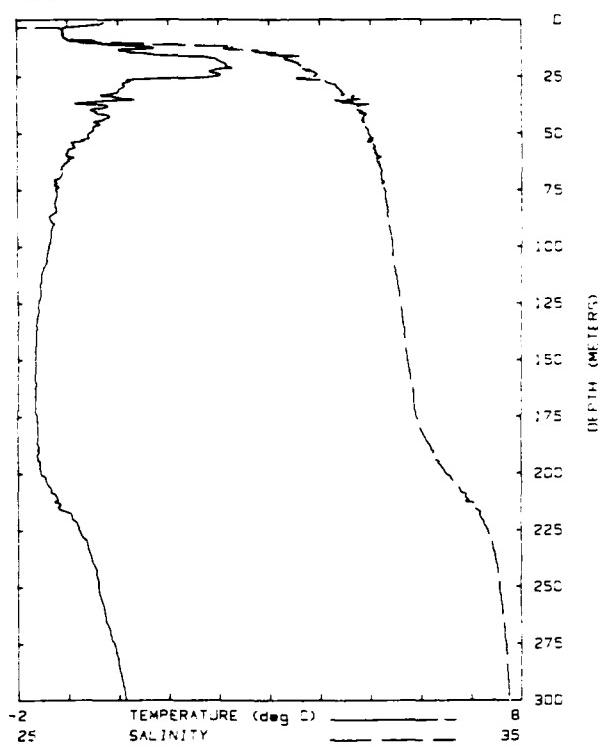
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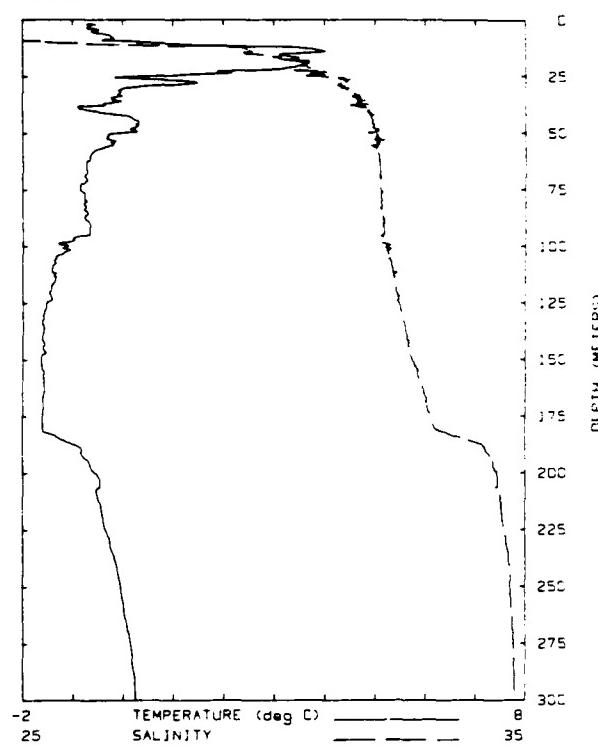
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	-1.35	1432.9	21.94	27.27
10.3	-1.38	1433.5	22.63	28.13
15.0	-1.37	1433.6	22.61	28.10
20.1	-1.32	1433.9	22.62	28.12
25.2	1.69	1446.6	23.77	29.63
30.2	1.01	1448.6	24.57	30.64
35.0	.61	1446.9	24.84	30.95
40.2	.51	1447.3	25.15	31.33
45.1	-.70	1442.9	25.52	31.73
50.2	-1.08	1441.4	25.68	31.91
55.1	-1.21	1440.8	25.77	32.02
60.1	-1.31	1440.4	25.84	32.11
65.1	-1.43	1440.0	25.91	32.19
70.0	-1.38	1440.3	25.95	32.23
75.1	-1.36	1440.6	26.00	32.30
80.1	-1.27	1441.0	26.03	32.34
85.3	-1.45	1440.4	26.08	32.39
90.2	-1.47	1440.4	26.10	32.42
95.1	-1.49	1440.5	26.14	32.47
100.1	-1.54	1440.4	26.21	32.56
110.1	-1.59	1440.5	26.29	32.65
120.1	-1.61	1440.7	26.36	32.74
130.0	-1.58	1441.1	26.46	32.86
140.3	-1.57	1441.5	26.57	33.00
150.1	-1.60	1441.6	26.69	33.15
160.2	-1.55	1442.4	26.83	33.32
170.4	-1.53	1442.9	26.97	33.49
180.0	-1.42	1443.7	27.08	33.63
190.0	-1.47	1443.9	27.21	33.79
200.2	-1.12	1446.1	27.42	34.06
210.1	-.87	1447.6	27.55	34.24
220.1	-.64	1449.0	27.65	34.37
230.2	-.53	1449.9	27.74	34.49
240.2	-.43	1450.6	27.79	34.56
250.1	-.40	1451.0	27.82	34.60
260.2	-.28	1451.8	27.86	34.65
270.3	-.22	1452.3	27.87	34.67
280.1	-.05	1453.3	27.90	34.72
289.5	.05	1453.9	27.92	34.74

Station Number	ASL Cast	APL Cast	Julian Day	GMT hmmm	Platform	Latitude	Longitude
160	X		251	1728	Ship	71 31.6	151 2.5
161	X		251	2036	Ship	71 31.2	151 35.3

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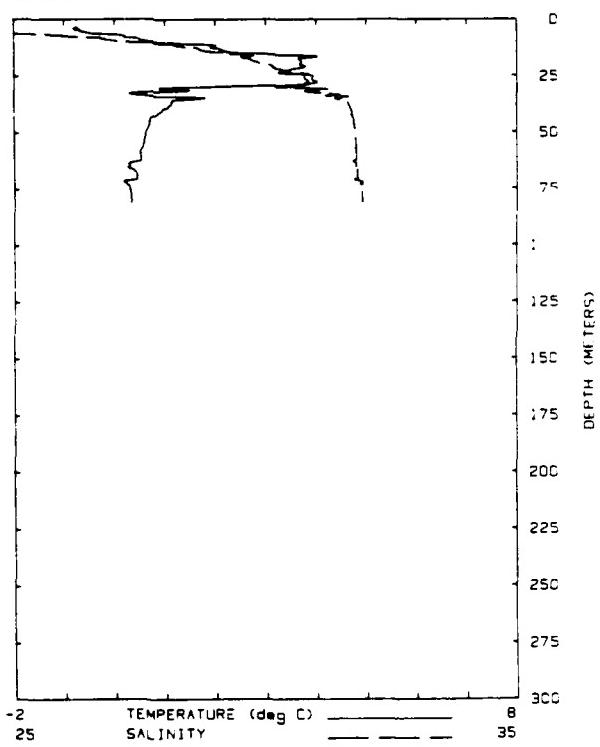


PRESSURE (dbar)	DEPTH (M.)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	_SOUND VELOCITY ("M.sec")
3.2	3.2	-0.74	17.355	20.418	1426.1	
9.7	9.6	-0.96	21.930	26.537	21.336	1433.4
16.0	16.0	0.90	26.176	30.313	24.313	1447.2
22.3	22.2	1.93	27.372	30.812	24.651	1452.6
28.8	28.6	0.07	26.273	31.258	25.111	1444.9
35.1	34.9	0.09	26.589	31.850	25.425	1445.6
41.4	41.2	-0.45	26.261	31.782	25.553	1447.3
47.7	47.5	-0.49	26.332	31.804	25.852	1443.4
54.0	54.3	-0.94	26.075	32.031	25.770	1441.6
61.3	61.5	-0.97	26.127	32.129	25.850	1441.7
67.6	68.8	-1.12	26.076	32.225	25.932	1441.2
75.0	75.5	-1.23	26.047	32.301	25.997	1440.9
83.3	82.8	-1.24	26.074	32.339	26.027	1441.0
90.6	90.3	-1.26	26.091	32.378	26.059	1441.1
98.2	97.6	-1.35	26.057	32.430	26.104	1441.9
105.4	104.7	-1.41	26.036	32.462	26.130	1441.7
112.4	111.7	-1.51	25.994	32.509	26.172	1441.4
120.0	119.2	-1.55	26.015	32.572	26.224	1440.5
127.5	126.6	-1.59	26.010	32.608	26.254	1440.4
135.0	134.1	-1.64	26.008	32.648	26.287	1440.4
141.0	140.8	-1.63	26.044	32.685	26.320	1440.6
149.4	148.3	-1.64	26.085	32.720	26.353	1440.7
156.0	155.8	-1.66	26.091	32.776	26.393	1440.6
164.5	163.3	-1.84	26.167	32.850	26.418	1441.1
171.4	170.1	-1.65	26.189	32.869	26.467	1441.2
178.9	177.6	-1.80	26.277	32.952	26.533	1441.1
186.5	185.1	-1.80	26.380	33.106	26.660	1442.0
194.2	192.7	-1.82	26.522	33.300	26.815	1442.3
201.7	200.1	-1.55	26.729	33.503	26.978	1443.1
208.5	208.0	-1.34	27.097	33.778	27.195	1444.5
215.2	213.5	-1.14	27.453	34.033	27.395	1445.9
221.9	220.2	-0.92	27.783	34.225	27.542	1447.3
228.9	227.0	-0.74	28.031	34.359	27.644	1448.4
235.9	234.0	-0.60	28.220	34.444	27.707	1449.3
242.6	240.7	-0.48	28.368	34.506	27.751	1450.1
249.5	247.4	-0.40	28.484	34.567	27.797	1450.6
255.9	253.8	-0.37	28.538	34.594	27.817	1450.9
262.4	260.2	-0.26	28.637	34.626	27.839	1451.5
268.7	266.5	-0.22	28.711	34.653	27.857	1451.9
275.0	272.7	-0.15	28.788	34.686	27.885	1452.4
283.6	279.2	-0.04	28.918	34.713	27.907	1453.0
288.1	285.6	0.02	28.975	34.722	27.901	1453.4
294.6	292.0	0.08	29.048	34.740	27.912	1453.8
301.3	299.7	0.13	29.107	34.759	27.925	1454.2
307.5	304.8	0.19	29.172	34.776	27.936	1454.6
319.2	318.4	0.27	29.262	34.797	27.948	1455.1
331.5	328.5	0.31	29.308	34.806	27.953	1455.5
343.2	340.2	0.35	29.364	34.822	27.963	1455.9
354.8	351.8	0.38	29.385	34.830	27.969	1456.2

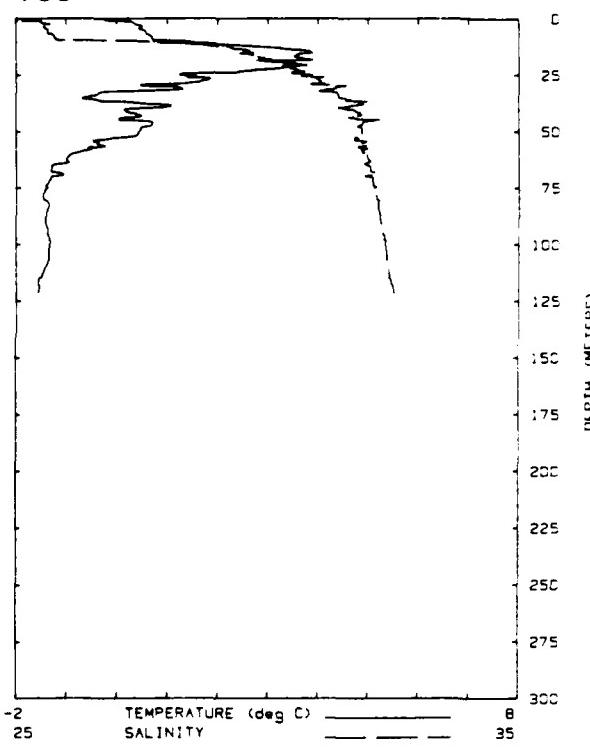
PRESSURE (dbar)	DEPTH (M.)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	_SOUND VELOCITY ("M.sec")
3.0	3.0	-0.71	19.197	22.667	18.230	1429.3
9.0	9.0	-0.36	19.900	23.401	18.803	1432.1
14.2	14.1	3.98	27.908	29.539	23.478	1455.6
19.3	19.2	3.70	28.574	30.574	24.324	1459.9
24.4	24.3	1.54	27.028	30.763	24.637	1450.8
29.4	29.2	0.58	26.708	31.303	25.123	1447.3
34.3	34.1	-0.07	26.378	31.538	25.342	1444.7
39.5	39.3	-0.88	25.985	31.827	25.101	1441.4
44.7	44.5	0.26	26.860	31.958	25.665	1445.9
49.7	49.4	0.26	27.082	32.079	25.782	1447.2
54.5	54.1	-0.17	26.726	32.091	25.791	1445.3
59.0	58.8	-0.59	26.369	32.062	25.783	1443.3
65.6	65.2	-0.73	26.286	32.091	25.812	1442.8
71.4	71.0	-0.89	26.328	32.104	25.821	1443.1
77.6	77.1	-0.76	26.292	32.121	25.837	1442.9
83.7	83.2	-0.73	26.303	32.097	25.816	1442.1
89.8	89.3	-0.68	26.393	32.167	25.871	1443.5
95.4	94.8	-0.66	26.431	32.194	25.892	1443.8
101.3	101.7	-1.15	26.050	32.201	25.914	1441.6
107.5	106.8	-1.36	25.890	32.336	26.228	1445.9
113.6	112.9	-1.34	26.028	32.371	26.056	1441.1
119.8	119.0	-1.43	26.204	32.429	26.106	1441.8
125.3	124.5	-1.50	25.974	32.458	26.121	1441.6
131.2	130.3	-1.59	25.860	32.537	26.196	1441.4
137.3	136.4	-1.58	26.020	32.599	26.246	1440.6
143.2	142.2	-1.58	26.084	32.685	26.316	1441.9
148.6	147.6	-1.59	26.079	32.683	26.315	1441.9
153.8	152.7	-1.63	26.193	32.799	26.409	1442.9
159.0	157.9	-1.59	26.216	32.870	26.466	1441.3
164.6	163.5	-1.58	26.222	32.883	26.557	1441.7
170.4	169.2	-1.59	26.342	33.035	26.800	1441.7
176.1	174.8	-1.80	26.392	33.113	26.663	1441.9
181.7	180.4	-1.59	26.456	33.206	26.738	1442.1
187.0	185.6	-1.18	27.289	33.879	27.271	1445.1
192.3	190.8	-0.83	27.855	34.245	27.556	1447.3
197.5	196.0	-0.88	28.086	34.362	27.643	1448.3
202.7	201.2	-0.50	28.282	34.441	27.700	1449.2
207.9	206.3	-0.46	28.282	34.402	27.866	1449.5
213.1	211.4	-0.49	26.344	34.498	27.745	1449.6
218.4	216.7	-0.42	26.426	34.529	27.767	1450.0
223.7	221.9	-0.38	26.486	34.585	27.794	1451.3
229.3	227.5	-0.30	26.588	34.601	27.820	1451.0
234.9	233.0	-0.24	26.666	34.640	27.849	1451.2
240.4	238.5	-0.18	26.783	34.687	27.866	1451.7
246.1	244.1	-0.10	26.827	34.680	27.881	1451.2
251.4	249.3	-0.05	26.887	34.700	27.887	1452.5
256.8	254.4	-0.02	26.830	34.718	27.801	1452.7
261.7	259.8	0.02	26.867	34.721	27.800	1453.0
267.0	264.7	0.08	26.922	34.745	27.817	1453.3
272.3	270.0	0.11	26.981	34.761	27.829	1451.6
277.6	275.2	0.15	26.918	34.764	27.826	1451.9
283.0	280.6	0.19	26.954	34.771	27.932	1454.1
288.6	286.2	0.21	26.188	34.784	27.941	1454.4
294.3	291.8	0.24	26.220	34.788	27.941	1454.6
300.0	297.4	0.25	26.237	34.794	27.946	1454.6

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
162	X		252	0018	Ship	71 22.2	151 32.5
163	X		252	0252	Ship	71 31.7	152 25.2

162



163

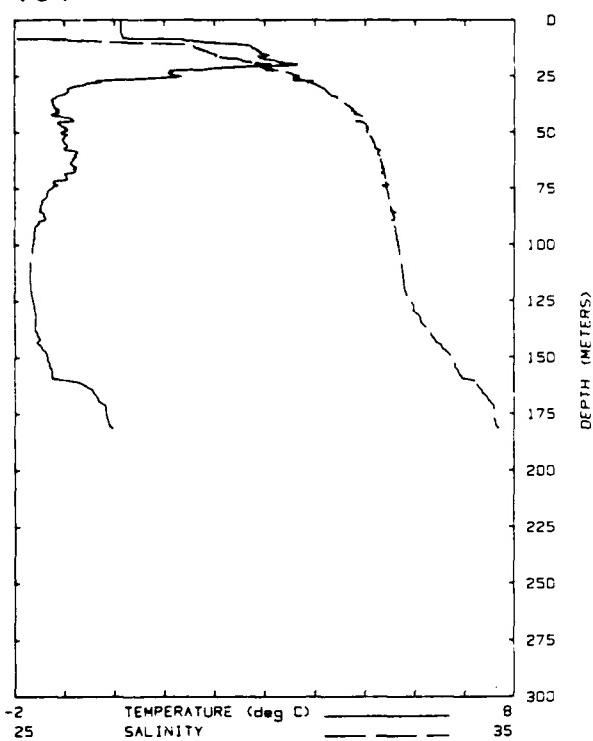


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (M/sec)
3.7	3.7	-0.74	19.230	32.832	18.347	1429.3
5.7	5.7	-0.60	20.132	33.883	19.193	1431.5
10.4	10.3	0.85	23.708	27.233	21.847	1442.8
15.2	15.2	2.47	26.651	29.431	23.513	1453.0
20.2	20.1	3.69	28.018	29.922	23.806	1459.0
25.1	25.0	3.92	28.923	30.774	24.462	1461.2
30.1	29.9	2.27	27.448	30.572	24.436	1453.9
35.2	35.0	1.82	27.870	31.529	25.231	1453.2
40.1	39.9	0.97	27.328	31.703	25.423	1449.7
45.3	45.0	0.70	27.161	31.755	25.480	1448.7
50.3	50.0	0.62	27.122	31.784	25.507	1448.4
55.5	55.2	0.58	27.087	31.796	25.519	1448.3
60.9	60.5	0.52	27.064	31.806	25.530	1448.2
66.2	65.8	0.28	26.800	31.842	25.571	1447.2
71.6	71.1	0.41	26.942	31.751	25.499	1447.8
76.8	76.3	0.32	27.000	31.926	25.636	1447.7
81.8	81.3	0.32	27.004	31.925	25.635	1447.7
81.7	81.2	0.32	27.004	31.925	25.605	1447.7
81.7	81.2	0.32	27.004	31.925	25.635	1447.7

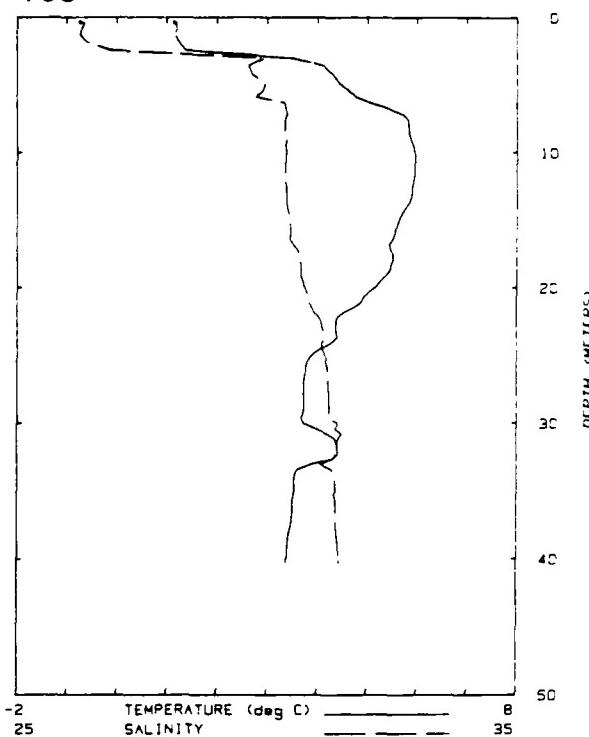
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (M/sec)
0.5	0.5	-0.17	20.432	33.938	19.232	1433.5
0.5	0.5	-0.21	20.314	33.814	19.133	1433.2
6.0	6.0	0.58	22.250	25.838	20.579	1439.4
11.0	11.0	1.58	24.751	27.894	22.341	1447.0
16.0	15.8	3.60	27.745	28.669	23.630	1458.3
21.0	20.8	3.78	28.543	30.449	24.216	1461.1
25.9	25.7	1.58	26.986	30.877	24.565	1455.9
30.8	30.7	1.24	27.253	31.338	25.115	1452.3
35.8	35.6	-0.62	26.028	31.848	25.449	1442.3
40.9	40.7	0.16	26.718	31.745	25.498	1446.1
46.0	45.8	0.87	27.288	31.956	25.643	1448.8
51.1	50.8	0.43	27.041	31.882	25.595	1447.7
56.1	55.8	-0.38	28.450	31.928	25.667	1444.2
61.4	61.0	-0.93	26.044	31.981	25.729	1441.7
66.6	66.2	-1.29	25.814	32.048	25.793	1441.1
71.7	71.3	-1.31	25.840	32.099	25.835	1442.2
76.8	76.3	-1.43	25.783	32.146	25.876	1439.8
81.7	81.2	-1.37	25.872	32.206	25.923	1442.2
86.7	86.1	-1.40	25.874	32.232	25.945	1442.2
91.6	91.1	-1.40	25.810	32.284	25.887	1441.3
96.6	96.0	-1.37	25.980	32.343	26.034	1442.6
101.5	100.8	-1.33	26.030	32.363	26.049	1441.9
106.4	105.7	-1.34	26.040	32.388	26.070	1441.0
111.4	110.6	-1.43	25.995	32.417	26.096	1442.7
116.3	115.5	-1.55	25.034	32.460	26.133	1445.3
121.2	120.3	-1.55	25.076	32.516	26.179	1445.4
122.3	121.4	-1.56	25.077	32.530	26.190	1445.4
122.3	121.4	-1.56	25.077	32.531	26.191	1445.4

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
164	X		252	0540	Ship	71 44.1	152 57.0
165	X		252	0952	Ship	71 43.7	154 17.3

164



165

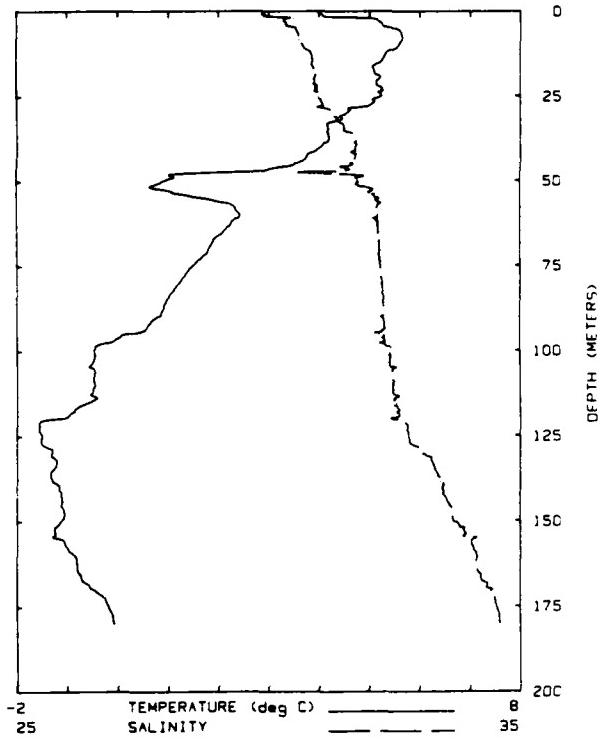


PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.0	1.0	0.13	20.867	23.897	19.274	1435.0
6.1	6.1	0.15	20.887	24.008	19.283	1435.2
11.0	11.0	2.43	25.583	28.134	22.482	1451.1
16.0	15.9	3.10	26.840	29.068	23.177	1455.3
21.0	20.9	2.74	27.315	29.989	23.921	1455.0
25.9	25.8	1.11	28.578	30.817	24.546	1448.7
30.9	30.8	-0.84	25.426	31.189	25.074	1442.1
35.9	35.7	-1.26	25.425	31.499	25.349	1439.1
41.1	40.8	-1.12	25.759	31.812	25.599	1440.2
46.2	45.9	-1.13	25.886	31.984	25.738	1440.5
51.3	51.0	-0.94	26.145	32.130	25.850	1441.7
56.3	56.0	-0.94	26.194	32.199	25.906	1441.8
61.4	61.0	-0.77	26.396	32.287	25.971	1442.8
66.4	66.0	-0.74	28.464	32.341	28.014	1443.1
71.5	71.1	-0.93	28.342	32.380	28.052	1441.4
76.6	76.1	-1.32	28.091	32.457	26.125	1442.7
81.7	81.2	-1.46	26.030	32.514	26.174	1442.2
86.8	86.2	-1.42	26.102	32.566	26.216	1440.6
91.8	91.3	-1.54	26.010	32.571	26.223	1442.1
96.9	96.3	-1.59	26.022	32.645	26.284	1442.0
102.0	101.3	-1.64	26.021	32.692	26.323	1439.9
107.1	106.4	-1.67	26.025	32.730	26.355	1439.9
112.1	111.4	-1.88	26.038	32.757	26.376	1435.9
117.2	116.4	-1.69	26.056	32.784	26.399	1440.0
122.2	121.3	-1.86	26.110	32.827	26.433	1440.3
127.2	126.3	-1.81	26.262	32.978	26.555	1440.8
132.2	131.3	-1.57	28.396	33.102	28.854	1443.3
137.2	136.3	-1.59	26.460	33.216	26.747	1441.4
142.2	141.2	-1.51	26.641	33.373	26.871	1442.3
147.2	146.2	-1.45	26.839	33.579	27.037	1442.7
152.4	151.3	-1.33	27.044	33.784	27.200	1442.7
157.3	156.2	-1.24	27.240	33.889	27.282	1444.3
162.3	161.1	-0.70	27.947	34.237	27.543	1447.4
167.3	166.1	-0.40	29.322	34.403	27.885	1449.1
172.3	171.0	-0.20	28.636	34.568	27.804	1450.3
177.2	175.8	-0.16	28.663	34.600	27.812	1450.6
182.4	177.1	-0.14	28.700	34.607	27.817	1450.7
186.8	179.5	-0.11	28.740	34.625	27.830	1450.9
182.6	181.2	-0.03	28.852	34.676	27.867	1451.4
182.2	180.8	-0.03	28.851	34.678	27.869	1451.4

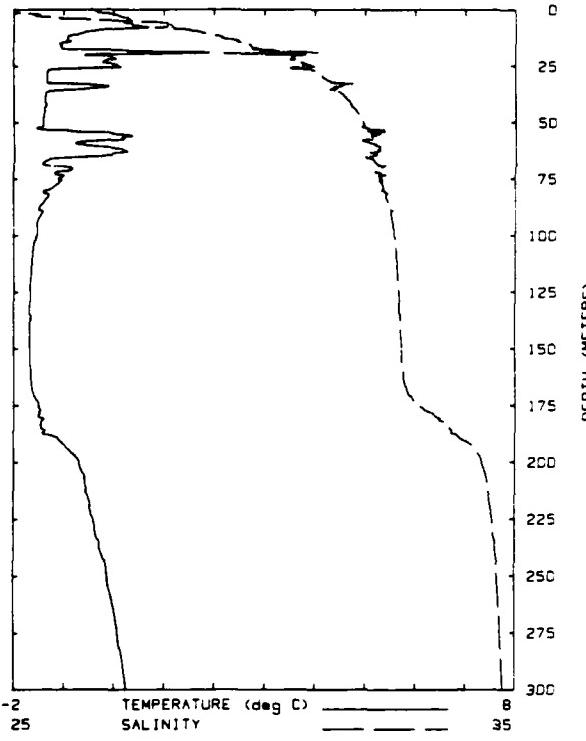
PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
0.3	0.3	1.14	23.128	26.248	23.063	1442.7
9.2	9.1	5.89	30.165	30.380	23.953	1466.6
17.3	17.2	5.49	30.046	30.616	24.177	1457.3
25.3	25.2	3.85	29.216	31.185	24.795	1461.4
33.2	33.0	3.91	29.172	31.074	24.701	1461.6
40.5	40.3	3.38	29.074	31.454	25.050	1450.0
40.5	40.3	3.38	29.079	31.459	25.054	1460.0

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
166	X		252	1213	Ship	71 38.6	155 35.3
167	X		253	0633	Ship	72 19.4	155 6.6

166



167

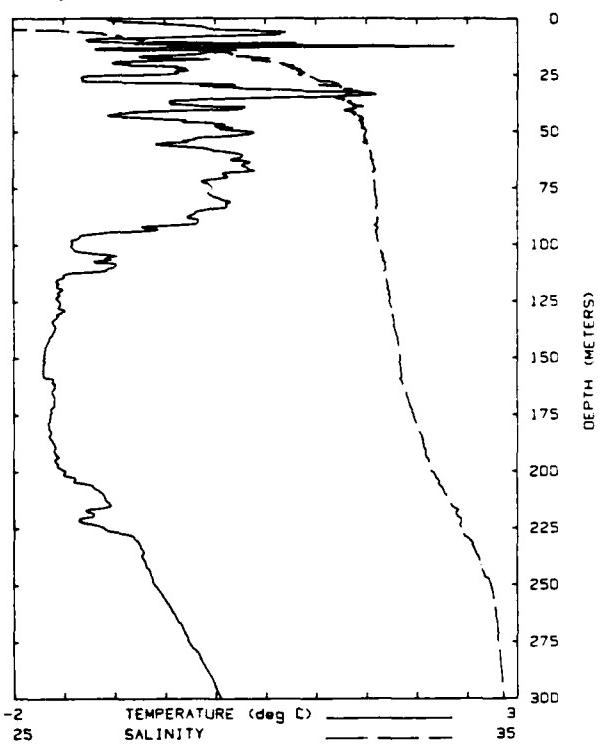


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (m/sec)
0.0	0.0	3.90	28.184	39.663	23.734	1455.9
2.4	2.4	5.13	28.466	30.295	23.963	1465.2
7.7	7.6	5.65	30.150	30.590	24.139	1467.8
12.8	12.7	5.31	30.116	30.856	24.386	1466.9
17.8	17.7	5.10	29.868	30.867	24.433	1466.1
22.8	22.7	5.27	30.133	30.816	24.438	1466.9
28.0	27.9	4.99	30.041	31.062	24.583	1466.1
33.1	32.9	4.19	29.693	31.416	24.945	1463.3
38.2	38.0	4.20	29.879	31.740	25.201	1463.8
43.2	43.0	3.75	29.592	31.718	25.226	1461.9
48.3	48.0	1.17	27.316	31.475	25.229	1450.5
53.4	53.1	1.05	27.860	32.037	25.846	1450.7
58.4	58.0	2.34	28.816	32.162	25.899	1456.7
63.6	63.2	2.24	28.740	32.168	25.712	1456.4
68.8	68.3	1.88	28.475	32.206	25.770	1454.9
73.9	73.5	1.60	28.262	32.224	25.802	1453.8
79.1	78.6	1.30	28.044	32.256	25.847	1452.5
84.3	83.8	1.02	27.648	32.268	25.889	1451.4
89.4	88.9	0.87	27.744	32.309	25.915	1450.9
94.5	94.0	0.54	27.438	32.259	25.892	1449.4
99.6	99.2	-0.43	26.771	32.401	26.052	1445.2
105.0	104.3	-0.54	26.699	32.418	26.069	1444.8
110.3	109.6	-0.45	26.816	32.477	26.113	1444.4
115.6	114.8	-0.50	26.783	32.485	26.121	1445.2
121.8	121.0	-1.85	26.118	32.717	26.341	1440.7
127.8	127.1	-1.51	26.225	32.812	26.617	1441.1
134.2	133.3	-1.22	26.808	33.265	26.792	1443.2
140.1	139.2	-1.20	26.854	33.462	26.835	1443.7
145.9	144.8	-1.11	27.131	33.599	27.043	1444.4
152.1	151.0	-1.18	27.220	33.791	27.200	1444.4
158.3	157.1	-1.04	27.529	34.054	27.408	1445.5
164.5	163.3	-0.80	27.792	34.133	27.483	1446.8
170.4	169.1	-0.54	26.151	34.330	27.612	1448.4
175.7	174.4	-0.20	26.594	34.527	27.755	1450.3
180.0	178.8	-0.09	26.732	34.588	27.797	1451.0
181.1	179.8	-0.07	26.760	34.598	27.806	1451.1
181.1	179.8	-0.07	26.759	34.598	27.806	1451.1

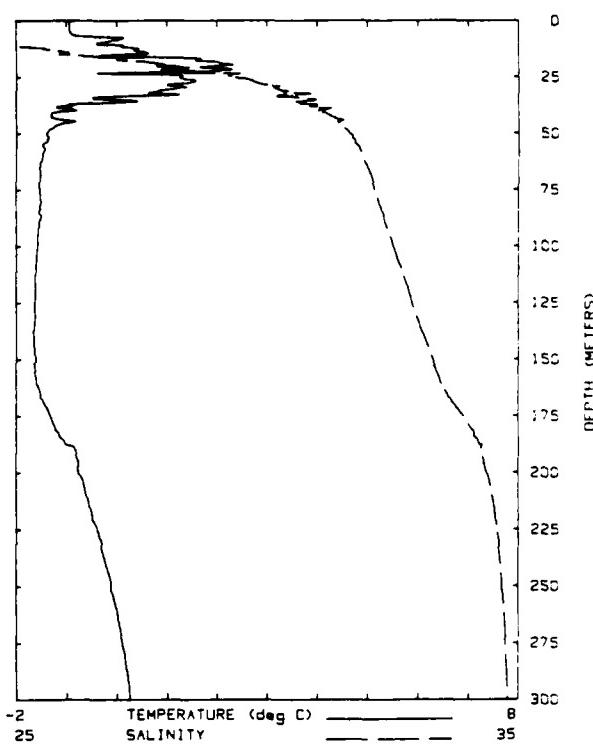
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (m/sec)
0.6	0.6	-0.38	20.767	24.537	19.717	1439.3
2.7	2.7	0.09	21.767	25.429	20.425	1436.8
7.7	7.7	0.58	24.251	28.165	22.605	1442.8
13.1	13.0	-0.93	23.934	29.175	23.464	1437.1
18.1	18.0	0.03	25.433	30.211	24.270	1442.1
23.0	22.9	-0.16	25.583	30.807	24.596	1442.8
28.0	27.8	-1.33	25.024	31.033	24.973	1438.0
33.7	33.5	-0.36	26.180	31.581	25.388	1443.4
39.3	39.0	-1.37	25.418	31.607	25.439	1438.7
45.2	44.9	-1.37	25.574	31.824	25.614	1439.1
51.0	50.7	-1.41	25.854	31.969	25.732	1439.2
56.2	55.9	0.33	27.218	32.214	25.867	1447.7
61.4	61.0	-0.18	26.908	32.336	25.989	1445.7
66.5	66.1	-1.20	25.039	32.117	25.847	1440.7
72.4	72.0	-1.08	26.083	32.186	25.899	1441.4
78.4	77.9	-1.14	26.158	32.352	26.035	1441.4
84.0	83.4	-1.32	26.073	32.428	26.102	1440.8
89.4	88.9	-1.49	26.027	32.537	26.194	1440.2
95.4	94.8	-1.53	26.013	32.560	26.214	1440.2
101.4	100.7	-1.55	26.020	32.590	26.239	1440.2
107.4	106.7	-1.61	25.994	32.620	26.264	1440.0
113.0	112.3	-1.82	26.009	32.644	26.284	1440.1
118.7	117.9	-1.65	25.990	32.651	26.290	1440.1
124.7	123.9	-1.87	25.992	32.672	26.308	1440.1
130.8	129.9	-1.87	26.013	32.692	26.324	1440.2
136.8	135.9	-1.84	26.044	32.705	26.333	1440.5
142.4	141.4	-1.88	26.030	32.718	26.346	1440.4
148.0	146.0	-1.68	26.044	32.734	26.356	1440.5
154.2	153.1	-1.87	26.054	32.741	26.363	1440.6
160.4	159.2	-1.85	26.095	32.771	26.387	1440.6
166.5	165.3	-1.84	26.128	32.784	26.406	1441.1
172.2	171.0	-1.59	26.267	32.934	26.518	1441.6
178.0	178.8	-1.46	26.557	33.187	26.720	1442.6
184.3	182.9	-1.45	26.864	33.601	27.055	1443.3
189.5	188.0	-1.14	27.354	33.911	27.296	1445.3
196.8	195.3	-0.86	27.841	34.250	27.560	1447.2
202.4	200.9	-0.88	28.067	34.353	27.836	1448.3
208.1	205.6	-0.58	28.208	34.423	27.889	1448.9
213.5	211.8	-0.55	28.259	34.458	27.715	1449.2
219.0	217.2	-0.47	28.366	34.503	27.746	1449.7
224.4	222.8	-0.45	28.411	34.536	27.774	1450.0
229.8	228.0	-0.37	28.498	34.565	27.784	1450.4
235.3	233.4	-0.34	28.548	34.586	27.809	1450.7
240.7	238.6	-0.27	28.627	34.611	27.826	1451.2
246.1	244.1	-0.15	28.753	34.641	27.845	1451.8
251.8	249.7	-0.12	28.787	34.652	27.852	1452.1
257.5	255.3	-0.08	28.834	34.686	27.881	1452.4
263.1	260.9	-0.01	28.805	34.880	27.869	1452.8
268.9	266.6	0.03	28.957	34.884	27.876	1453.1
274.9	272.5	0.08	29.010	34.708	27.887	1453.4
280.8	278.4	0.10	29.040	34.714	27.891	1453.7
286.9	284.4	0.18	29.108	34.734	27.893	1454.0
292.8	290.4	0.20	29.168	34.742	27.898	1454.3
298.0	296.4	0.23	29.191	34.755	27.816	1454.6
305.7	303.1	0.27	29.233	34.766	27.823	1454.9

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
168	X		253	1122	Ship	72 39.8	154 58.0
169	X		253	1648	Ship	72 59.9	155 1.4

168



169



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (M/sec)
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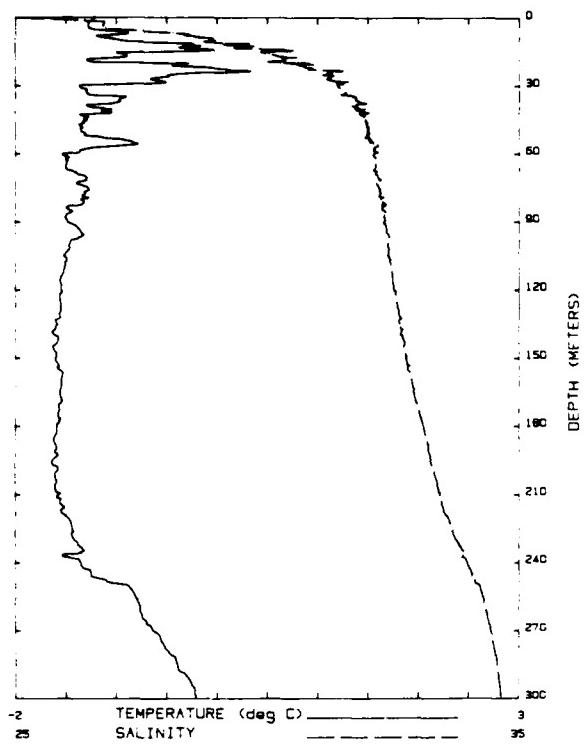
0.3	0.3	-1.06	17.856	21.419	17.207	1425.6
6.3	6.3	0.71	23.031	26.510	21.273	1441.1
11.5	11.5	0.07	23.298	27.403	22.011	1439.5
16.6	16.5	-0.41	24.441	28.334	23.579	1439.9
22.1	22.0	-0.34	25.453	30.801	24.597	1442.0
27.5	27.3	-1.31	25.025	31.020	24.962	1438.5
32.7	32.6	1.26	27.615	31.774	25.483	1451.0
37.6	37.4	-0.43	26.186	31.652	25.447	1443.2
42.8	42.5	-0.98	25.976	31.813	25.395	1441.9
48.1	47.9	0.01	26.781	31.980	25.693	1445.6
53.1	52.8	-0.15	26.646	31.864	25.687	1445.2
58.1	57.8	-0.07	26.777	32.049	25.752	1445.7
63.1	62.7	0.19	27.059	32.148	25.821	1447.1
68.0	67.6	0.31	27.150	32.130	25.801	1447.6
73.0	72.5	-0.10	26.859	32.178	25.857	1446.0
77.9	77.5	-0.06	26.897	32.187	25.864	1446.3
83.0	82.4	0.12	27.063	32.215	25.878	1447.2
88.0	87.4	-0.26	26.754	32.206	25.888	1445.5
93.2	92.6	-0.84	26.480	32.241	25.830	1443.9
98.4	98.6	-1.42	25.666	32.243	25.955	1440.3
105.8	105.1	-0.87	26.271	33.304	25.991	1442.6
112.1	111.4	-1.07	26.357	32.388	26.062	1442.4
118.4	117.5	-1.56	25.903	32.436	26.114	1442.2
124.7	123.9	-1.57	25.930	32.475	26.146	1440.3
131.2	130.3	-1.55	25.002	32.533	26.192	1442.6
137.6	136.7	-1.58	25.005	32.559	26.214	1440.6
144.1	143.1	-1.66	25.881	32.636	26.278	1440.4
150.4	149.3	-1.70	25.878	32.686	26.305	1440.4
156.0	155.8	-1.70	25.888	32.695	26.327	1440.5
163.5	162.3	-1.59	26.124	32.744	26.364	1441.2
170.2	168.9	-1.80	26.189	32.850	26.450	1441.4
177.1	175.7	-1.64	26.237	32.946	26.529	1441.4
183.8	182.4	-1.63	26.327	33.053	26.815	1441.7
190.8	189.4	-1.58	26.435	33.146	26.689	1442.2
197.7	196.2	-1.57	26.529	33.252	26.775	1442.5
204.5	203.1	-1.38	26.794	33.408	26.897	1443.7
211.8	210.0	-1.11	27.145	33.577	27.025	1445.4
219.1	217.4	-1.26	27.175	33.809	27.216	1445.0
226.7	224.9	-1.10	27.388	33.882	27.280	1446.1
233.5	231.7	-0.75	27.641	34.108	27.441	1440.1
240.5	238.5	-0.71	27.883	34.246	27.551	1448.6
247.2	245.2	-0.84	28.120	34.348	27.631	1449.2
253.8	251.8	-0.58	28.298	34.498	27.748	1449.9
260.8	258.6	-0.46	28.431	34.552	27.787	1450.5
268.0	265.7	-0.37	28.541	34.597	27.820	1451.1
275.4	273.0	-0.27	28.651	34.623	27.836	1451.7
281.4	279.0	-0.18	28.757	34.658	27.860	1452.3
287.2	284.8	-0.11	28.828	34.675	27.870	1452.7
292.4	289.8	-0.04	28.908	34.694	27.882	1453.1
297.2	294.6	0.00	28.855	34.708	27.891	1453.4
301.5	298.0	0.05	29.007	34.724	27.901	1453.7
309.5	306.8	0.13	29.096	34.747	27.916	1454.3

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
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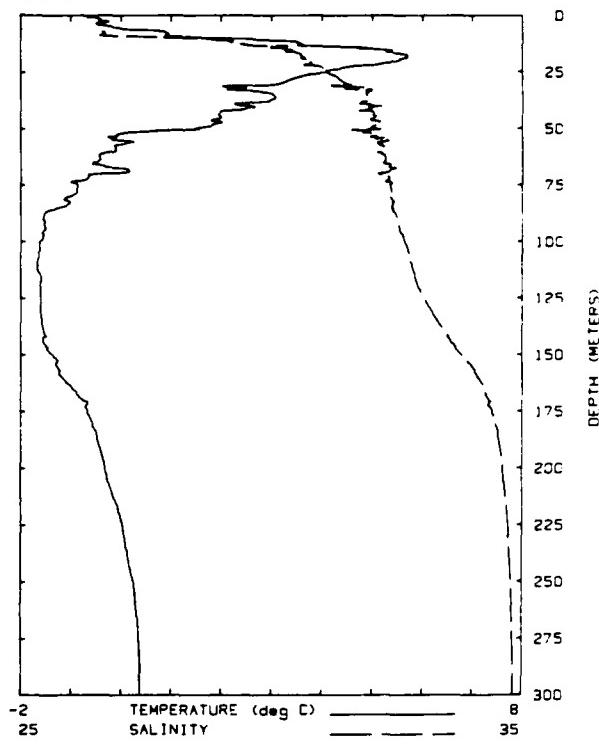
0.4	0.4	-0.87	16.844	19.850	15.943	1424.7
3.1	3.0	-0.95	16.206	21.660	17.402	1426.6
8.2	9.2	-0.10	20.293	23.700	19.040	1433.6
14.4	14.3	-0.56	22.570	26.049	20.809	1441.0
19.6	19.5	-2.24	25.237	27.901	22.308	1452.1
24.8	24.7	1.32	25.633	29.225	23.419	1447.8
30.3	30.1	1.20	26.310	30.181	24.186	1448.6
35.6	35.4	0.23	26.174	30.867	24.869	1445.3
41.8	41.6	-1.30	25.179	31.208	25.115	1438.6
48.2	47.9	-1.30	25.438	31.552	25.392	1439.2
54.8	54.5	-1.44	25.476	31.757	25.582	1438.8
61.4	61.0	-1.48	25.575	31.923	25.697	1435.0
67.7	67.3	-1.52	25.628	32.037	25.790	1439.1
74.2	73.7	-1.54	25.684	32.133	25.866	1439.2
80.4	79.9	-1.50	25.777	32.215	25.934	1435.6
86.6	86.1	-1.51	25.858	32.332	26.029	1439.8
93.6	93.0	-1.56	25.875	32.410	26.093	1439.8
100.5	99.8	-1.58	25.935	32.504	26.170	1439.8
107.1	106.4	-1.60	25.989	32.604	26.251	1440.2
113.6	112.9	-1.62	26.061	32.713	26.339	1440.2
119.6	118.8	-1.81	26.139	32.811	26.419	1440.5
127.2	126.3	-1.83	26.195	32.901	26.492	1440.7
133.7	132.7	-1.83	26.273	33.009	26.580	1440.9
140.1	139.1	-1.66	26.328	33.112	26.664	1441.0
146.6	145.5	-1.84	26.427	33.221	26.752	1441.4
153.2	152.1	-1.63	26.502	33.318	26.831	1441.6
159.8	158.6	-1.80	26.821	33.436	26.925	1442.0
166.3	165.1	-1.51	26.792	33.576	27.036	1442.7
173.0	171.7	-1.38	27.085	33.601	27.215	1443.8
179.8	178.2	-1.27	27.306	33.896	27.359	1444.7
186.4	185.0	-1.09	27.579	34.187	27.501	1445.5
192.5	191.0	-0.81	27.889	34.267	27.572	1447.4
198.8	197.3	-0.77	27.979	34.334	27.625	1447.8
205.2	203.6	-0.67	28.136	34.429	27.697	1448.5
211.8	210.2	-0.81	28.224	34.473	27.731	1449.9
218.4	216.6	-0.51	28.351	34.532	27.774	1449.6
224.0	222.2	-0.44	28.437	34.568	27.800	1450.0
229.5	227.7	-0.36	28.520	34.594	27.817	1450.5
234.8	232.8	-0.31	28.588	34.807	27.825	1450.9
240.0	238.0	-0.24	28.855	34.833	27.843	1451.3
245.5	243.5	-0.18	28.744	34.880	27.881	1451.7
250.8	249.8	-0.12	28.804	34.889	27.886	1452.1
256.7	254.6	-0.07	28.888	34.895	27.884	1452.5
262.2	260.0	-0.01	28.934	24.714	27.886	1452.8
268.8	265.8	0.04	28.892	34.731	27.907	1453.2
273.3	271.0	0.08	28.932	34.737	27.910	1453.4
279.0	276.7	0.13	28.987	34.751	27.919	1453.8
284.9	282.5	0.17	28.137	34.762	27.925	1454.1
290.7	288.2	0.21	28.183	34.774	27.933	1454.4

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
170	X		253	2331	Ship	72 33.8	154 10.6
171	X		255	0233	Ship	72 11.6	154 43.0

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171



PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (m/sec)
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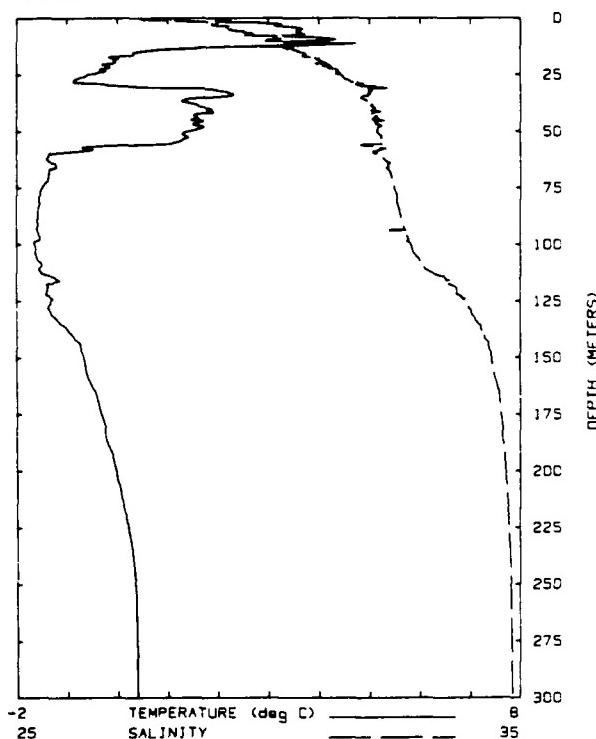
5.5	5.5	-0.89				
10.7	10.6	-1.14				
16.0	15.9	-1.19				
21.2	21.1	-1.11				
26.3	26.2	-1.18				
31.5	31.4	-1.19				
36.8	35.6	-1.42				
42.4	42.2	-1.36				
49.0	48.8	-1.34				
55.6	55.3	-1.40				
62.2	61.9	-1.37				
68.8	68.3	-1.37				
75.5	75.0	-1.32				
82.1	81.6	-1.31				
88.9	88.3	-1.41				
95.1	94.5	-1.46				
101.5	100.8	-1.58				
107.8	107.2	-1.48				
114.2	113.4	-1.48				
120.5	119.7	-1.54				
126.8	126.0	-1.57				
133.3	132.3	-1.58				
139.7	138.8	-1.49				
145.2	145.2	-1.49				
152.5	151.4	-1.51				
159.0	157.9	-1.52				
165.5	164.3	-1.53				
172.2	170.9	-1.56				
178.6	177.3	-1.58				
184.9	183.5	-1.58				
191.3	189.9	-1.82				
197.9	196.4	-1.82				
204.6	203.1	-1.59				
210.8	209.1	-1.81	26.582	33.388	26.870	1442.7
217.3	215.6	-1.56	26.698	33.487	26.949	1443.2
223.8	222.0	-1.49	26.815	33.549	27.013	1443.7
230.2	228.4	-1.45	26.925	33.643	27.088	1444.2
236.9	235.0	-1.38	27.086	33.785	27.202	1444.6
242.6	240.7	-1.55	27.023	33.888	27.290	1444.2
249.6	247.6	-1.33	27.313	34.035	27.402	1445.6
256.7	254.6	-0.91	27.812	34.227	27.544	1447.9
263.4	261.2	-0.79	27.965	34.305	27.803	1448.7
270.3	268.1	-0.74	28.074	34.380	27.869	1449.1
277.1	274.8	-0.84	28.210	34.449	27.712	1449.8
283.6	281.3	-0.93	28.344	34.505	27.753	1450.5
290.0	287.5	-0.42	28.489	34.586	27.787	1451.2
295.7	293.2	-0.35	28.572	34.602	27.823	1451.6
301.7	299.0	-0.25	28.887	34.823	27.843	1452.3
308.8	307.1	-0.18	28.780	34.663	27.865	1452.7

PRESSURE (dBar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (m/sec)
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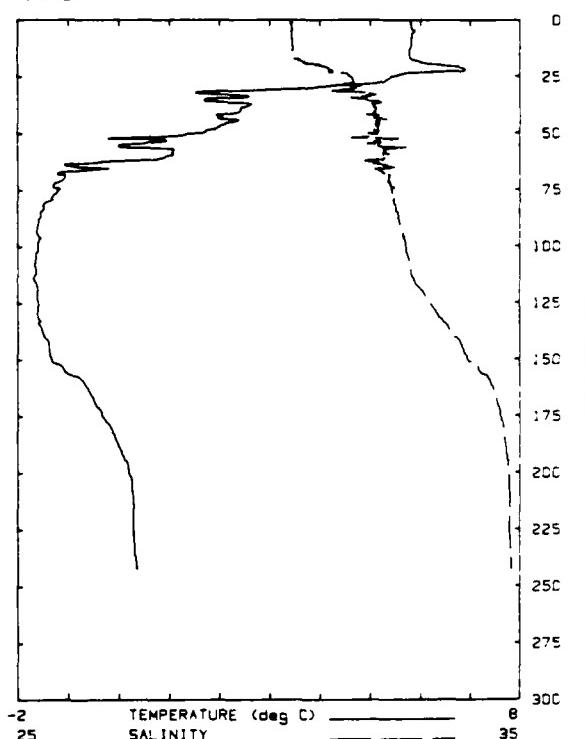
1.8	1.8	-0.40	20.508	24.213	19.456	1432.8
7.1	7.1	0.76	23.199	26.675	21.404	1441.6
12.0	12.0	3.51	27.247	29.182	23.235	1457.2
17.0	16.9	5.48	28.881	30.551	24.127	1467.2
21.8	21.8	5.13	29.924	30.803	24.364	1466.2
26.8	26.6	3.66	29.143	31.257	24.867	1462.8
31.7	31.5	2.03	28.097	31.599	25.272	1454.2
36.5	36.3	3.08	29.186	32.891	25.424	1455.2
41.5	41.2	2.50	28.768	31.882	25.543	1456.9
46.5	46.2	1.86	28.279	31.891	25.597	1455.2
51.5	51.2	0.73	27.274	31.867	25.568	1449.1
56.6	56.3	0.20	27.032	32.099	25.781	1447.0
61.6	61.3	-0.34	26.856	32.175	25.866	1444.4
66.8	66.4	-0.42	26.739	32.369	26.025	1444.7
72.0	71.6	-0.64	26.520	32.304	25.981	1445.6
78.2	77.7	-0.88	26.397	32.384	26.061	1442.7
84.2	83.7	-1.05	26.278	32.409	26.079	1442.1
89.7	89.1	-1.54	25.850	32.492	26.159	1439.9
96.0	95.3	-1.53	26.004	32.553	26.208	1440.1
102.1	101.4	-1.63	26.015	32.676	26.310	1439.9
108.3	107.6	-1.64	26.063	32.745	26.366	1440.1
114.4	113.6	-1.64	26.132	32.842	26.445	1440.4
119.8	119.0	-1.61	26.208	32.908	26.497	1440.6
126.1	125.2	-1.80	26.325	33.052	26.614	1441.0
132.1	131.2	-1.61	26.431	33.203	26.737	1441.2
138.0	137.1	-1.56	26.589	33.380	26.879	1441.8
143.6	142.6	-1.55	26.732	33.550	27.016	1442.2
148.7	147.7	-1.48	26.804	33.698	27.134	1442.6
153.8	152.7	-1.26	27.244	33.819	27.307	1444.2
159.1	158.0	-1.24	27.372	34.071	27.429	1444.8
164.4	163.2	-1.05	27.644	34.215	27.539	1445.8
170.3	169.0	-0.81	27.829	34.332	27.625	1447.1
175.3	174.0	-0.88	28.100	34.406	27.679	1447.9
180.3	179.0	-0.58	28.218	34.485	27.723	1448.5
185.2	183.0	-0.50	28.340	34.523	27.766	1449.1
190.8	188.5	-0.45	28.394	34.542	27.779	1449.4
196.8	193.3	-0.39	28.481	34.580	27.807	1449.8
200.6	198.1	-0.33	28.556	34.611	27.829	1450.2
204.3	202.7	-0.28	28.612	34.629	27.842	1450.9
208.8	207.2	-0.23	28.676	34.648	27.854	1450.9
213.9	212.2	-0.15	28.780	34.674	27.871	1451.5
218.8	217.0	-0.06	28.861	34.701	27.889	1451.9
223.6	221.8	-0.01	28.917	34.713	27.895	1452.2
228.3	226.5	0.04	28.975	34.727	27.904	1452.6
233.5	231.6	0.09	29.028	34.741	27.913	1452.9
238.3	236.4	0.13	29.074	34.753	27.921	1453.2
243.4	241.4	0.17	29.118	34.764	27.927	1453.4
248.6	246.5	0.21	29.161	34.776	27.935	1453.7
253.7	251.6	0.26	29.218	34.786	27.940	1454.0
258.5	256.4	0.29	29.245	34.782	27.944	1454.2
263.2	261.0	0.31	29.276	34.801	27.949	1454.4
268.0	265.8	0.34	29.310	34.810	27.954	1454.5
272.9	270.6	0.36	29.327	34.813	27.956	1454.8
277.7	275.3	0.38	29.339	34.817	27.959	1454.9
282.6	280.2	0.38	29.358	34.823	27.963	1455.1
287.4	285.0	0.38	29.386	34.825	27.964	1455.2
292.3	289.7	0.38	29.371	34.824	27.967	1455.3
297.1	294.5	0.39	29.378	34.832	27.970	1455.4
302.1	299.4	0.39	29.388	34.834	27.971	1455.5
307.0	304.3	0.39	29.394	34.838	27.974	1455.6

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
172	X		255	0443	Ship	72 2.6	154 53.6
173	X		255	0622	Ship	71 53.1	154 58.5

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PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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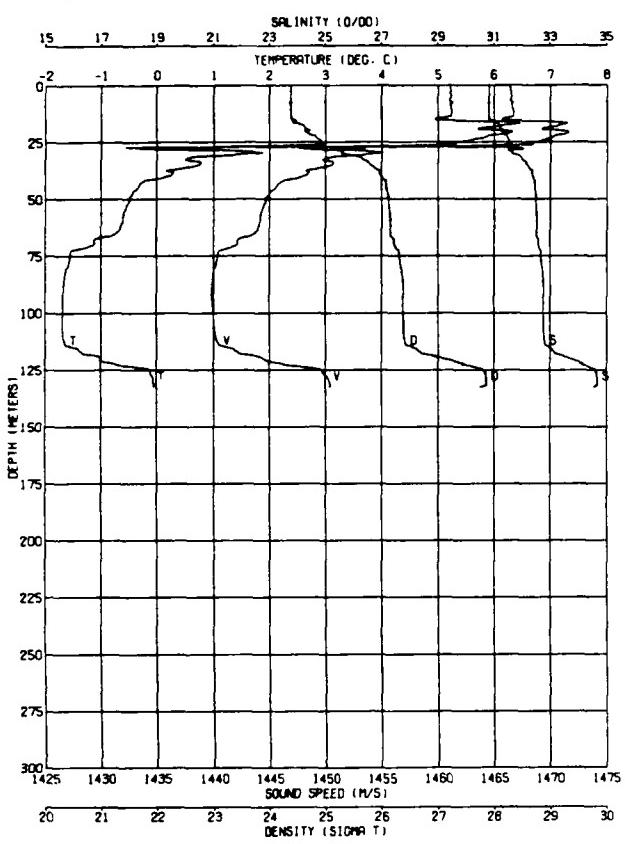
Temperature and conductivity profiles from 2 dBar to 300 dBar. Salinity is calculated from conductivity.

2.0	2.0	3.24	26.891	29.012	23.123	1455.6
8.3	8.2	3.40	26.902	30.180	24.037	1457.9
13.4	13.4	1.84	26.901	30.504	24.423	1456.8
18.7	18.6	-0.08	25.852	30.895	24.905	1443.7
23.9	23.7	-0.24	26.095	31.343	25.191	1443.5
29.1	28.0	-0.40	26.313	31.888	25.640	1443.1
34.3	34.3	-2.29	28.608	31.978	25.556	1455.9
39.6	39.6	1.72	28.245	32.094	25.889	1453.6
45.1	44.8	1.51	28.048	32.057	25.874	1452.7
50.3	50.0	1.47	28.085	32.146	25.747	1452.7
55.5	55.2	1.14	27.907	32.259	25.859	1451.5
60.8	60.5	-1.37	25.894	32.246	25.955	1435.9
67.1	66.7	-1.32	28.026	32.365	26.051	1442.5
73.0	72.5	-1.40	26.031	32.456	26.126	1442.3
79.0	78.5	-1.54	25.977	32.536	26.195	1439.8
85.3	84.8	-1.57	26.000	32.595	26.243	1435.8
91.8	81.2	-1.57	26.062	32.673	26.305	1442.1
98.1	97.4	-1.53	26.163	32.766	26.380	1440.5
103.7	103.0	-1.62	26.155	32.858	26.457	1442.2
109.6	108.8	-1.50	26.399	33.057	26.616	1441.2
115.4	114.6	-1.27	26.821	33.508	26.974	1443.0
120.6	119.8	-1.39	26.993	33.737	27.163	1442.8
126.3	125.4	-1.33	27.180	33.924	27.313	1443.4
131.8	131.0	-1.31	27.285	34.047	27.412	1443.8
137.1	136.1	-1.06	27.611	34.207	27.533	1445.3
142.1	141.1	-0.87	27.824	34.276	27.582	1446.3
147.2	146.1	-0.73	28.019	34.380	27.680	1447.2
152.2	151.1	-0.66	28.127	34.437	27.704	1447.7
157.3	156.1	-0.62	28.170	34.466	27.725	1448.0
162.1	161.0	-0.55	28.288	34.522	27.767	1448.5
167.1	165.9	-0.43	28.431	34.580	27.809	1449.2
172.1	170.8	-0.37	28.495	34.594	27.818	1449.6
177.0	175.7	-0.31	28.566	34.622	27.830	1449.9
181.8	180.5	-0.25	28.647	34.649	27.855	1450.4
186.7	185.3	-0.23	28.670	34.654	27.858	1450.5
191.5	190.0	-0.15	26.759	34.883	27.878	1451.0
196.4	194.9	-0.08	26.828	34.894	27.884	1451.4
201.1	199.6	-0.03	26.867	34.713	27.897	1451.8
206.0	204.4	0.00	26.927	34.724	27.904	1452.0
210.9	209.2	0.06	26.986	34.737	27.911	1452.4
215.8	214.1	0.10	26.935	34.749	27.916	1452.6
220.8	219.0	0.17	26.106	34.766	27.929	1453.0
225.8	224.0	0.21	26.151	34.778	27.935	1453.3
230.7	228.9	0.24	26.180	34.785	27.940	1453.6
235.7	233.8	0.28	26.233	34.789	27.949	1453.8
241.1	239.1	0.30	26.259	34.804	27.952	1454.0
246.0	244.0	0.32	26.285	34.808	27.954	1454.2
250.6	248.6	0.25	26.316	34.818	27.980	1454.4
255.3	253.2	0.36	26.338	34.827	27.987	1454.6
260.3	258.1	0.37	26.347	34.829	27.988	1454.7
265.4	263.1	0.37	26.353	34.830	27.989	1454.8
270.5	268.2	0.38	26.357	34.830	27.989	1454.9
275.5	273.2	0.38	26.386	34.837	27.974	1455.0
280.6	278.2	0.38	26.375	34.837	27.974	1455.1
285.6	283.2	0.38	26.383	34.841	27.977	1455.2
288.8	286.3	0.38	26.380	34.845	27.980	1455.3
295.9	293.4	0.39	26.395	34.848	27.980	1455.4
301.0	298.4	0.39	26.400	34.847	27.982	1455.5
308.3	303.0	0.40	26.404	34.848	27.982	1455.6

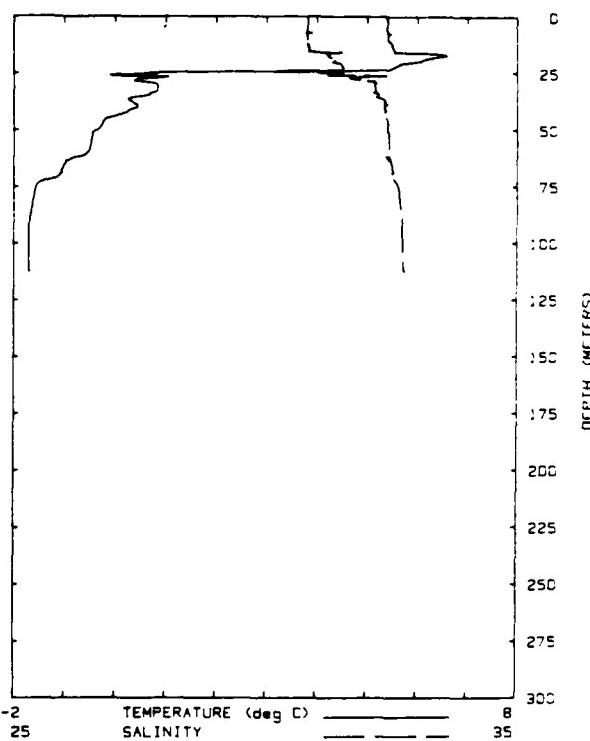
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
-----------------	-----------	---------------------	----------------------	----------	---------	------------------------

1.0	1.0	5.80	30.133	30.434	23.998	1468.1
3.0	3.0	5.81	30.136	30.435	23.999	1468.2
8.4	8.4	5.81	30.143	30.437	24.000	1468.3
13.7	13.7	5.78	30.149	30.465	24.025	1468.3
19.2	19.1	6.05	30.571	30.889	24.170	1469.7
24.8	24.7	5.54	30.967	31.599	24.946	1468.9
30.9	30.7	3.37	29.250	31.886	25.235	1461.1
36.3	36.1	1.84	28.414	32.185	25.754	1454.2
41.6	41.4	2.27	28.895	32.088	25.654	1456.0
46.9	46.6	2.03	28.552	32.164	25.724	1455.2
52.5	52.2	0.19	26.666	31.634	25.408	1446.3
58.1	57.8	-1.05	27.885	32.319	25.912	1451.2
63.6	63.2	-0.45	26.522	32.105	25.613	1444.1
69.3	68.9	-1.05	26.237	32.367	26.045	1441.7
75.2	74.8	-1.18	26.197	32.425	26.095	1444.4
81.2	80.7	-1.46	26.002	32.484	26.150	1440.1
87.8	87.3	-1.55	26.003	32.572	26.224	1440.0
94.4	93.8	-1.62	26.001	32.648	26.287	1439.8
101.0	100.4	-1.80	26.068	32.714	26.340	1440.1
107.5	106.8	-1.65	26.072	32.773	26.389	1440.0
113.2	112.5	-1.65	26.096	32.804	26.414	1442.2
120.1	119.3	-1.59	26.297	33.011	26.581	1440.8
126.5	125.6	-1.58	26.456	33.211	26.743	1442.3
133.1	132.2	-1.58	26.615	33.426	26.916	1441.7
139.3	138.3	-1.50	26.823	33.615	27.067	1442.4
145.0	144.0	-1.38	27.074	33.829	27.237	1442.4
151.6	150.5	-1.31	27.236	33.967	27.347	1444.0
157.5	156.4	-0.98	27.716	34.245	27.561	1446.0
163.0	161.8	-0.64	28.153	34.445	27.709	1448.0
168.0	167.2	-0.50	28.337	34.532	27.773	1448.8
173.8	172.4	-0.36	28.508	34.598	27.820	1449.6
179.8	177.5	-0.24	28.851	34.649	27.856	1450.3
184.0	182.7	-0.10	28.807	34.884	27.884	1451.1
189.1	187.7	-0.00	28.905	34.712	27.894	1451.7
194.0	192.5	0.09	29.017	34.748	27.918	1452.3
199.9	197.4	0.19	29.110	34.764	27.926	1452.8
205.7	202.1	0.24	29.174	34.781	27.937	1453.1
208.6	207.0	0.26	29.184	34.785	27.939	1453.3
213.3	211.7	0.28	29.232	34.783	27.944	1453.5
218.0	216.3	0.29	29.232	34.785	27.946	1453.6
222.0	221.1	0.29	29.234	34.798	27.946	1453.7
227.7	225.9	0.29	29.238	34.798	27.948	1453.8
232.3	230.5	0.31	29.364	34.809	27.956	1453.9
237.1	235.2	0.31	29.271	34.810	27.956	1454.0
242.1	240.2	0.34	29.308	34.820	27.983	1454.3
243.9	242.0	0.35	29.319	34.827	27.966	1454.3
242.0	240.0	0.35	29.319	34.827	27.966	1454.3

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
174		X	255	0829	Ship	71 42.0	155 39.7
175	X						
174							



175



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	5.23	1466.6	24.38	30.82
10.4	5.24	1466.7	24.39	30.82
15.0	4.95	1465.7	24.41	30.82
20.1	6.28	1471.2	24.66	31.29
25.2	5.28	1468.4	24.95	31.56
30.2	1.48	1454.0	25.32	31.65
35.0	.75	1450.7	25.82	32.20
40.3	.14	1447.9	26.02	32.40
45.1	-.34	1445.5	26.08	32.44
50.0	-.50	1444.7	26.12	32.48
55.1	-.58	1444.3	26.14	32.50
60.1	-.62	1444.1	26.14	32.50
65.1	-.73	1443.7	26.15	32.51
70.0	-1.14	1442.1	26.23	32.59
75.3	-1.56	1440.4	26.31	32.68
80.2	-1.61	1440.1	26.33	32.70
85.4	-1.67	1439.9	26.36	32.74
90.1	-1.68	1439.8	26.38	32.76
95.1	-1.69	1439.9	26.38	32.76
100.2	-1.69	1440.0	26.38	32.76
110.1	-1.69	1440.1	26.39	32.77
120.0	-1.01	1444.4	27.09	33.66
130.1	-.06	1450.4	27.88	34.68
132.4	-.06	1450.3	27.75	34.53

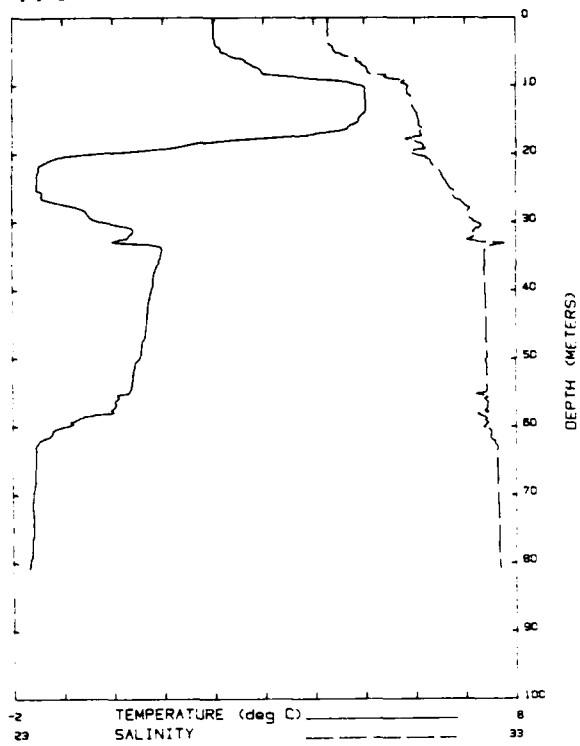
PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dBar) (M) (deg C) (mS/cm) (0/00) (M/sec)

0.0	0.0	3.30	30.128	30.811	24.342	1466.9
0.0	0.0	5.40	30.143	30.814	24.343	1467.0
5.4	5.4	5.40	30.144	30.815	24.344	1467.0
10.6	10.5	5.42	30.173	30.824	24.348	1467.2
15.7	15.6	5.54	30.205	30.839	24.347	1467.8
20.8	20.7	5.80	30.277	31.377	24.741	1469.6
26.0	25.9	0.05	26.221	31.215	25.076	1444.7
31.1	31.0	0.83	27.585	32.147	25.787	1445.6
36.4	36.2	0.30	27.257	32.305	25.942	1447.4
41.5	41.3	0.28	27.289	32.362	25.989	1447.5
46.9	46.6	-0.24	26.910	32.412	26.052	1445.2
52.1	51.6	-0.45	26.764	32.437	26.081	1444.4
57.5	57.2	-0.49	26.733	32.438	26.083	1444.3
62.9	62.5	-0.85	26.452	32.446	26.103	1442.7
68.2	67.8	-1.06	26.341	32.515	26.165	1441.9
74.2	73.7	-1.51	26.044	32.594	26.241	1440.5
77.5	77.1	-1.58	26.020	32.643	26.282	1439.7
81.0	81.4	-1.82	26.005	32.662	26.298	1439.6
86.3	87.7	-1.87	25.991	32.690	26.322	1439.5
94.0	93.4	-1.69	25.989	32.712	26.340	1439.5
100.3	99.6	-1.70	25.994	32.721	26.348	1439.6
106.7	106.0	-1.70	25.999	32.727	26.353	1439.7
112.5	111.7	-1.70	26.008	32.734	26.358	1439.8
113.3	112.5	-1.68	26.039	32.752	26.372	1440.0

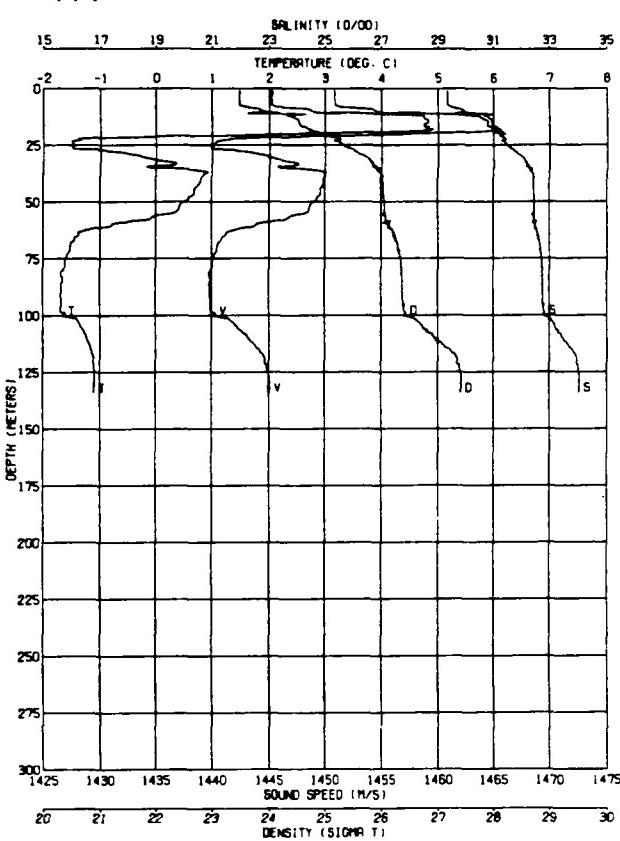
Station ASL APL Julian GMT  
Number Cast Cast Day hhmm Platform Latitude Longitude

176 X 255 0948 Ship 71 38.9 156 6.6  
177 X

176



177



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dbar) (M) (deg C) (mS/cm) (‰) (M/sec)

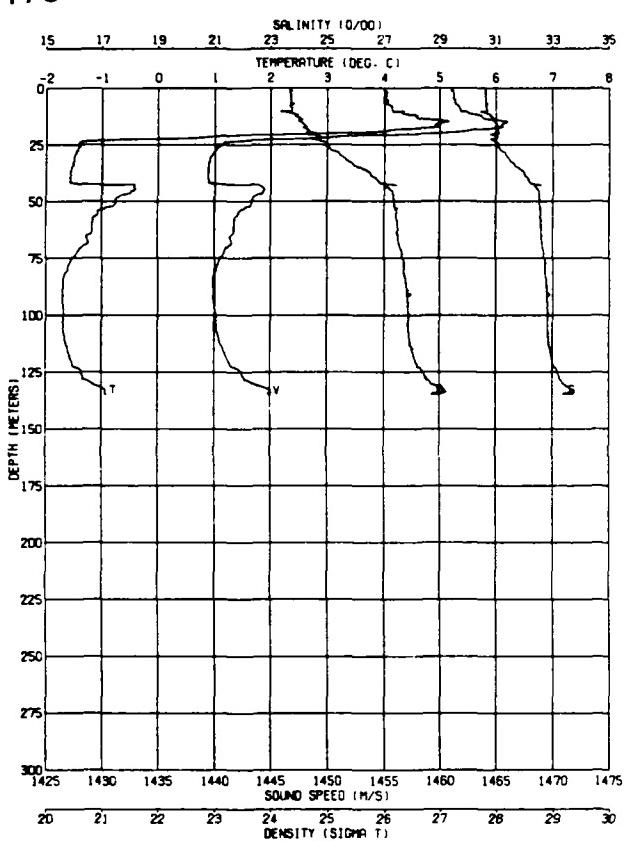
3.3	3.3	2.01	26.184	29.277	23.421	1452.6
6.5	8.4	2.81	27.500	30.040	23.966	1455.6
13.7	13.6	5.03	28.988	30.952	24.493	1455.8
18.8	18.7	2.87	28.105	30.800	24.573	1456.6
24.0	23.9	-1.50	25.253	31.527	25.377	1437.8
30.0	28.8	-0.49	26.434	32.056	25.776	1443.3
35.2	35.0	0.87	27.859	32.381	25.967	1450.6
40.4	40.2	0.80	27.725	32.386	25.981	1445.9
45.7	45.4	0.88	27.634	32.406	26.004	1449.4
51.0	50.7	0.54	27.548	32.420	26.022	1448.9
56.1	55.8	0.33	27.376	32.414	26.028	1448.0
61.4	61.0	-1.01	28.240	32.331	26.015	1441.8
67.6	67.2	-1.54	28.043	32.638	26.275	1439.7
73.8	73.3	-1.80	28.019	32.658	26.294	1439.6
79.1	78.8	-1.81	28.016	32.671	26.305	1439.6
82.2	81.7	-1.87	25.088	32.693	26.325	1439.4

DEPTH (M) T (C) V (M/S) DENSITY S (‰)

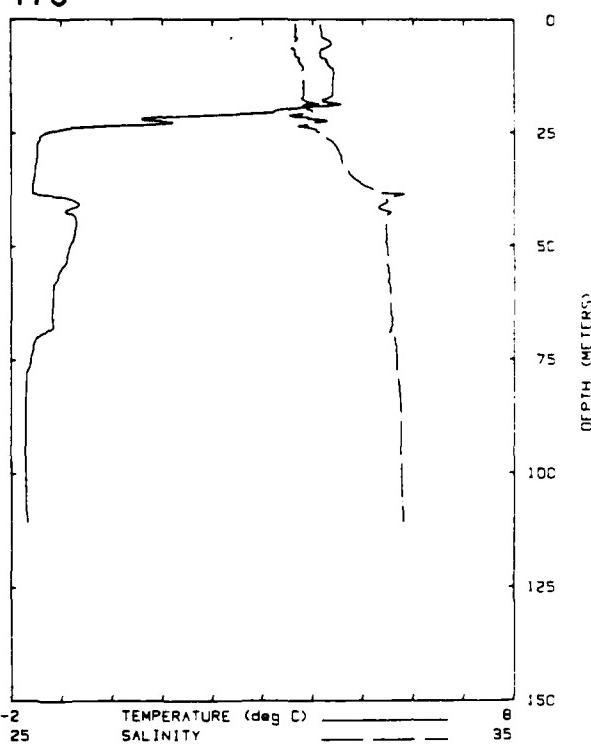
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.2	2.04	1450.9	23.48	29.34
10.1	2.79	1454.6	23.92	29.96
15.3	4.81	1464.5	24.54	30.95
20.3	2.39	1456.9	25.09	31.43
25.4	-1.49	1440.1	25.34	31.49
30.1	-0.26	1444.9	25.71	31.98
35.0	-0.02	1446.0	25.93	32.23
40.2	.81	1449.9	26.03	32.44
45.1	.69	1449.7	26.04	32.45
50.2	.49	1449.0	26.05	32.46
55.3	.24	1448.1	26.06	32.45
60.2	-.78	1443.8	26.12	32.48
65.2	-1.41	1441.1	26.22	32.57
70.2	-1.53	1440.4	26.32	32.66
75.1	-1.62	1440.1	26.34	32.72
80.2	-1.66	1440.0	26.38	32.76
85.1	-1.67	1439.9	26.39	32.77
90.1	-1.69	1439.8	26.38	32.76
95.1	-1.69	1439.9	26.39	32.77
100.4	-1.62	1440.3	26.42	32.81
110.2	-1.23	1443.2	26.95	33.47
120.3	-1.11	1444.7	27.34	33.97
130.3	-1.10	1445.1	27.42	34.07
134.1	-1.11	1445.1	27.41	34.06

Station Number	ASL Cast	APL Cast	Julian Day	GMT hmmm	Platform	Latitude	Longitude
178	X	X	255	1130	Ship	71 35.2	156 32.5
179							

178



179



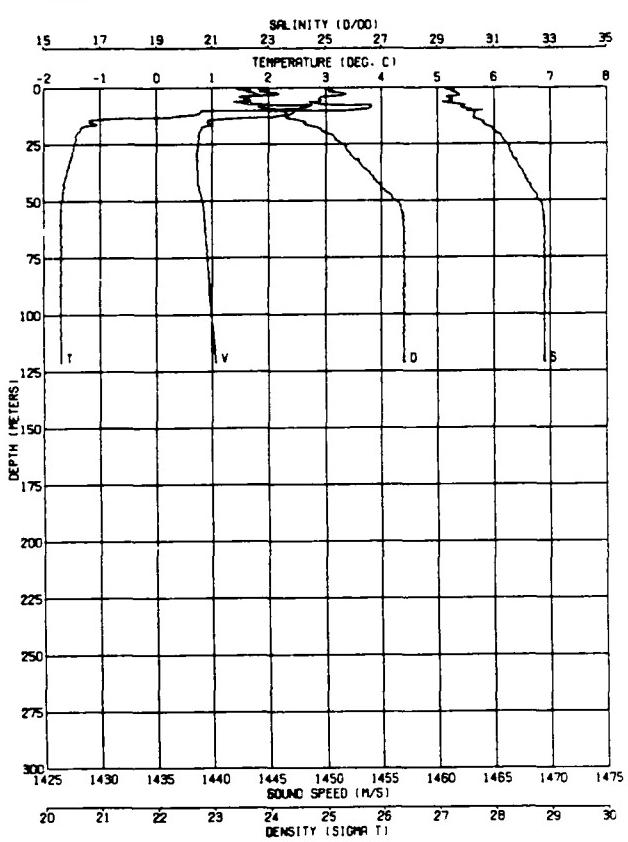
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
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DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	4.04	1461.3	24.35	30.63
10.4	4.15	1462.8	24.36	30.66
15.3	5.07	1465.9	24.54	30.99
20.4	2.46	1457.1	24.58	30.81
25.5	-1.40	1440.5	24.97	31.05
30.5	-1.50	1439.6	25.28	31.42
35.3	-1.55	1439.4	25.62	31.83
40.3	-1.57	1439.4	25.88	32.15
45.0	-0.42	1444.5	26.12	32.48
50.0	-0.76	1443.3	26.19	32.56
55.3	-1.08	1442.1	26.22	32.58
60.3	-1.17	1441.8	26.25	32.62
65.1	-1.27	1441.5	26.27	32.64
70.0	-1.34	1441.2	26.29	32.66
75.4	-1.55	1440.4	26.34	32.71
80.6	-1.63	1440.1	26.35	32.72
86.3	-1.70	1439.9	26.39	32.77
90.1	-1.70	1439.9	26.41	32.79
95.2	-1.70	1439.9	26.42	32.81
100.2	-1.69	1440.1	26.43	32.82
110.1	-1.66	1440.4	26.45	32.85
120.0	-1.53	1441.3	26.56	32.99
130.0	-1.17	1443.5	26.84	33.34
134.8	-.92	1445.0	27.01	33.56

PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOND VELOCITY (m/sec)
1.6	1.6	4.15	28.992	30.652	24.344	1461.6
7.0	8.9	4.15	28.994	30.642	24.335	1461.7
12.5	12.4	4.62	29.349	30.808	24.441	1461.1
17.9	17.8	4.20	29.192	30.825	24.475	1461.3
23.4	23.3	0.82	26.808	30.932	24.813	1447.6
30.0	29.8	-1.48	25.284	31.547	25.393	1438.1
36.8	36.8	-1.57	25.561	32.020	25.777	1433.3
43.7	43.5	-0.72	26.585	32.491	26.134	1443.1
50.5	50.2	-0.83	26.501	32.497	26.143	1442.7
57.3	57.0	-1.07	26.340	32.532	26.179	1441.7
64.3	63.9	-1.19	26.270	32.558	26.203	1441.3
71.2	70.7	-1.51	26.084	32.857	26.292	1447.0
78.0	77.6	-1.68	25.984	32.697	26.328	1439.3
84.9	84.4	-1.71	26.009	32.753	26.382	1439.4
91.5	80.9	-1.71	26.018	32.771	26.389	1435.5
97.7	97.1	-1.71	26.024	32.774	26.391	1439.6
104.4	103.7	-1.70	26.041	32.787	26.401	1435.8
110.9	110.2	-1.68	26.080	32.808	26.416	1440.0
111.3	110.5	-1.68	26.081	32.808	26.418	1440.0
111.1	110.4	-1.68	26.080	32.807	26.417	1440.0

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
180	X	X	255	1350	Ship	71 25.7	157 31.0
181							

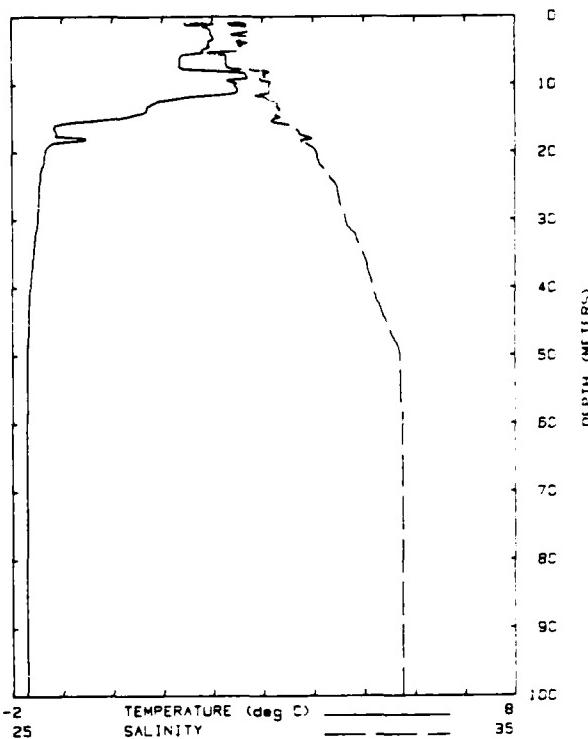
180



DEPTH (M)	T (C)	V (M/S)	DENSITY	S (P/OO)
5.2	1.63	1449.4	23.57	29.44
10.3	1.91	1451.9	24.03	30.03
15.1	-1.20	1439.6	24.67	30.67
20.3	-1.41	1438.8	25.03	31.10
25.1	-1.47	1438.7	25.31	31.44
30.1	-1.49	1438.7	25.45	31.62
35.4	-1.57	1438.7	25.69	31.91
40.1	-1.62	1438.7	25.85	32.11
45.1	-1.66	1438.9	26.06	32.37
50.3	-1.69	1439.2	26.28	32.64
55.2	-1.70	1439.3	26.39	32.77
60.1	-1.70	1439.3	26.39	32.77
65.6	-1.69	1439.5	26.41	32.79
70.2	-1.69	1439.5	26.39	32.77
75.0	-1.70	1439.6	26.41	32.79
80.3	-1.70	1439.6	26.40	32.79
85.4	-1.70	1439.7	26.41	32.79
90.1	-1.70	1439.8	26.40	32.79
95.5	-1.70	1439.9	26.42	32.81
100.1	-1.70	1440.0	26.41	32.79
110.2	-1.70	1440.1	26.40	32.79
120.1	-1.70	1440.3	26.41	32.79
121.1	-1.70	1440.3	26.40	32.79

181

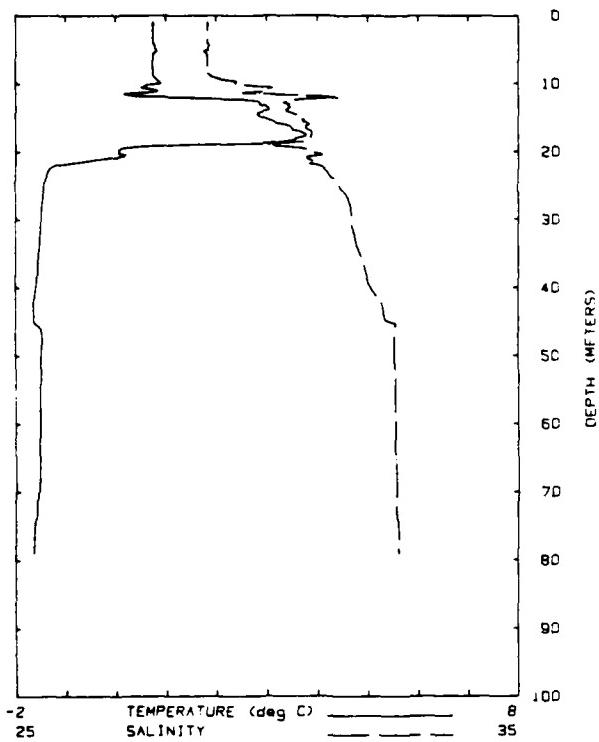
181



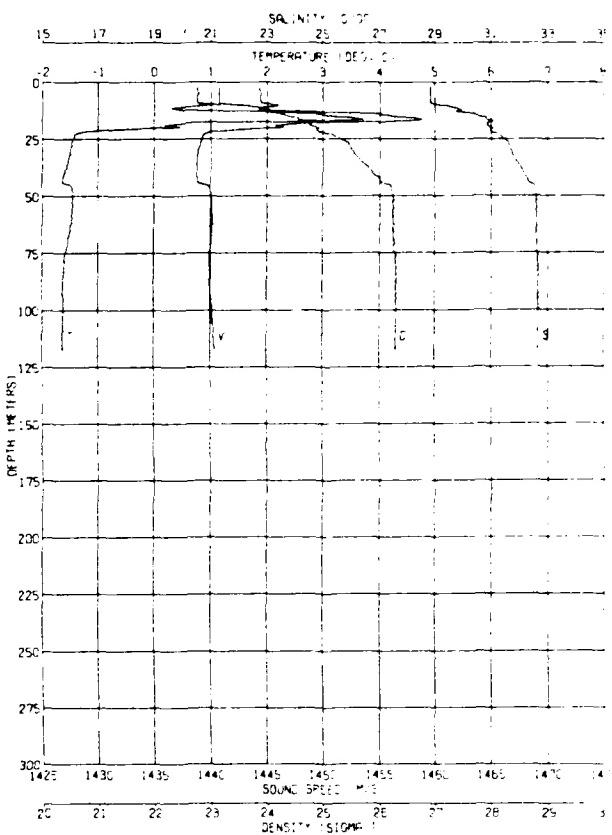
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOND VELOCITY (m/sec)
1.1	1.1	2.05	26.375	29.471	23.573	1451.0
4.2	4.2	1.94	26.330	29.520	23.619	1450.6
9.5	8.5	2.30	26.802	29.894	23.973	1451.9
14.7	14.6	0.44	25.757	30.231	24.289	1444.9
20.7	20.6	-1.35	25.043	31.088	25.018	1437.8
27.1	27.0	-1.47	25.270	31.518	25.369	1437.9
33.7	33.6	-1.56	25.477	31.894	25.675	1438.1
40.4	40.2	-1.64	25.835	32.201	25.925	1438.2
47.2	46.9	-1.68	25.861	32.548	26.208	1438.6
54.0	53.7	-1.71	25.864	32.716	26.344	1438.9
60.8	60.3	-1.71	25.993	32.758	26.378	1439.0
67.5	67.1	-1.71	26.000	32.781	26.381	1439.1
74.4	74.0	-1.71	26.003	32.761	26.385	1439.2
81.3	80.8	-1.71	26.006	32.760	26.379	1439.3
88.1	87.5	-1.71	26.009	32.759	26.379	1439.4
94.8	94.2	-1.71	26.012	32.759	26.379	1439.6
101.3	100.6	-1.71	26.015	32.758	26.379	1439.7
101.8	101.1	-1.71	26.016	32.760	26.380	1439.7

Station ASL APL Julian GMT  
 Number Cast Cast Day hmmm Platform Latitude Longitude  
 182 X 255 1504 Ship 71 21.2 157 57.8  
 183 X

182



183



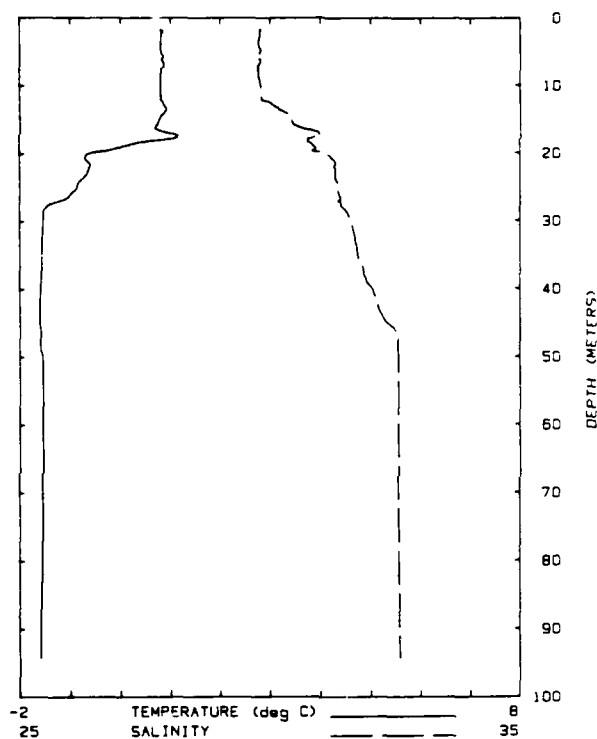
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec.)
3.3	3.3	0.74	24.894	28.840	23.139	1444.3
8.5	8.5	0.74	24.887	28.827	23.129	1444.4
13.7	13.7	3.04	27.882	30.471	24.298	1456.8
19.0	19.0	2.89	27.506	30.055	23.978	1455.7
24.5	24.4	-1.40	25.224	31.388	25.262	1438.0
30.0	29.9	-1.49	25.376	31.885	25.504	1438.1
35.0	35.7	-1.55	25.482	31.889	25.671	1438.2
42.1	41.9	-1.83	25.874	32.240	25.857	1438.4
49.2	47.9	-1.46	26.028	32.535	26.192	1435.7
54.3	54.0	-1.50	26.006	32.550	26.205	1439.6
59.6	59.5	-1.51	26.008	32.557	26.211	1439.7
65.7	65.3	-1.52	26.007	32.562	26.215	1439.7
71.0	71.4	-1.58	25.866	32.575	26.226	1439.6
77.0	77.5	-1.63	25.867	32.625	26.269	1439.5
79.5	78.0	-1.63	25.867	32.622	26.267	1439.5
79.4	78.9	-1.84	25.866	32.626	26.269	1439.5

DEPTH (M)	T (C)	V (M/S)	DENSITY S (‰/OC)
5.2	.79	1444.5	23.13
10.4	.83	1446.1	23.65
15.1	3.17	1456.3	24.38
20.3	-.07	1445.6	24.94
25.4	-1.45	1439.2	25.34
30.1	-1.49	1438.8	25.51
35.7	-1.54	1438.7	25.72
40.1	-1.60	1438.8	25.88
45.3	-1.46	1439.8	26.21
50.2	-1.45	1440.0	26.24
55.3	-1.46	1440.1	26.26
60.1	-1.47	1440.1	26.24
65.3	-1.49	1440.1	26.24
70.2	-1.53	1440.1	26.27
75.0	-1.58	1439.9	26.27
80.3	-1.61	1439.9	26.29
85.5	-1.62	1439.9	26.30
90.1	-1.63	1440.0	26.30
95.1	-1.61	1440.1	26.31
100.1	-1.63	1440.2	26.31
110.1	-1.63	1440.3	26.33
117.5	-1.63	1440.4	26.30
			32.66

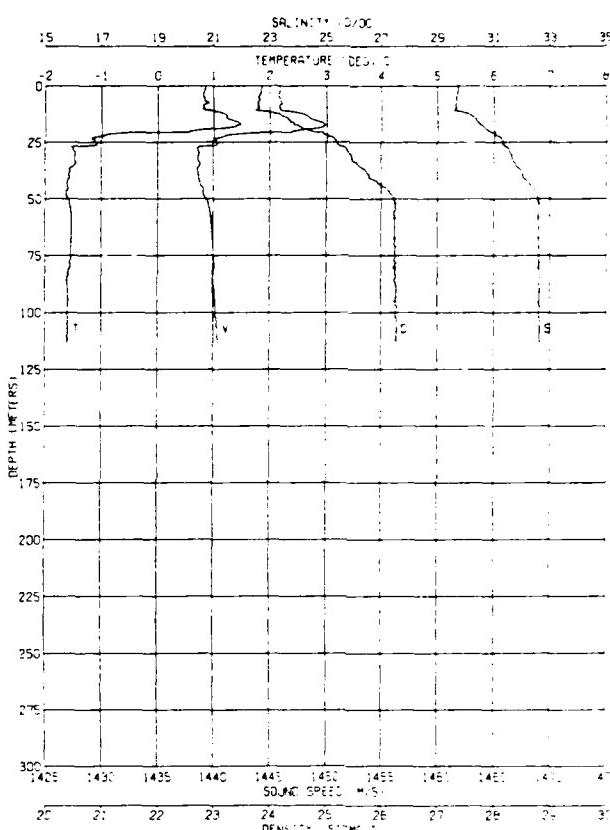
Station ASL APL Julian GMT  
Number Cast Cast Day hmmm Platform Latitude Longitude

184 X 255 1623 Ship 71 16.3 158 26.0  
185 X

184



185

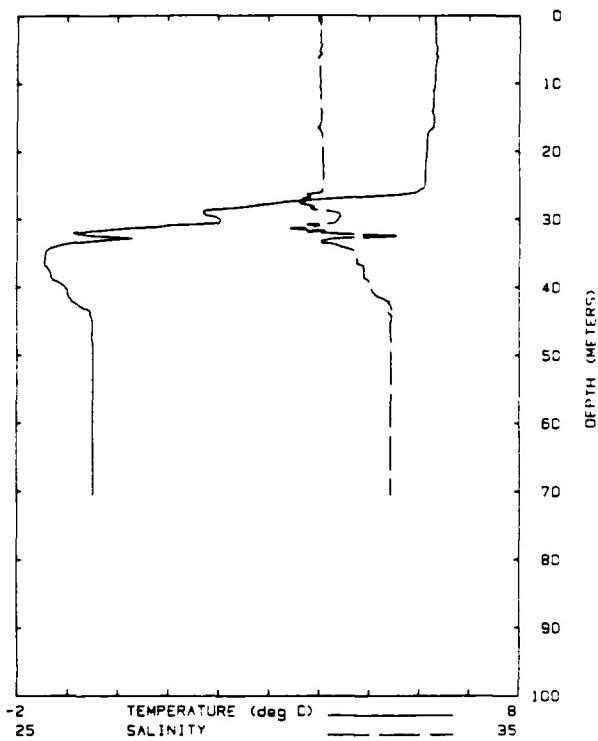


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
3.9	3.9	0.79	25.657	29.761	23.875	1445.8
8.6	8.6	0.80	25.876	29.780	23.890	1445.9
13.5	13.4	0.91	26.063	30.161	24.190	1447.0
18.7	18.6	0.30	26.115	30.628	24.755	1445.2
24.1	23.9	-0.78	25.851	31.315	25.187	1440.9
30.0	29.9	-1.53	25.277	31.595	25.432	1437.8
35.7	35.5	-1.57	25.371	31.758	25.565	1437.9
41.9	41.6	-1.80	25.618	32.128	25.855	1438.4
47.7	47.4	-1.59	25.941	32.556	26.212	1438.1
53.6	53.3	-1.54	25.978	32.552	26.208	1439.4
59.4	59.1	-1.54	25.982	32.555	26.210	1439.5
65.0	64.6	-1.54	25.990	32.556	26.211	1439.6
70.9	70.5	-1.54	25.992	32.560	26.214	1439.7
76.7	76.2	-1.55	25.992	32.567	26.219	1439.8
82.6	82.0	-1.55	25.993	32.569	26.221	1439.8
88.4	87.8	-1.58	25.985	32.581	26.231	1439.8
94.3	93.7	-1.58	25.984	32.584	26.235	1439.9
94.3	93.7	-1.59	25.983	32.586	26.236	1439.9

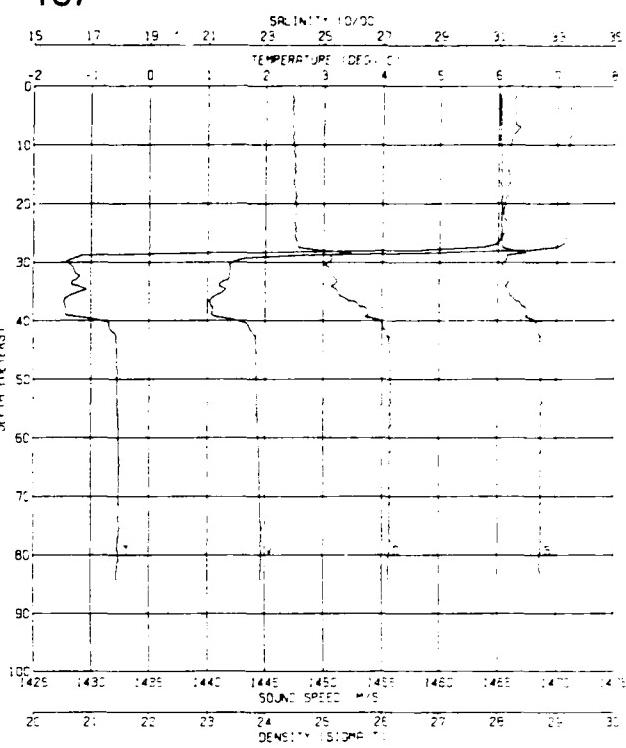
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰/‰)
5.4	.84	1445.9	23.79	29.66
10.3	.81	1445.8	23.79	29.65
15.0	1.32	1448.8	24.33	30.35
20.3	.55	1447.0	24.76	30.86
25.1	-1.07	1440.4	25.21	31.33
30.1	-1.47	1438.7	25.43	31.59
35.1	-1.49	1438.8	25.58	31.78
40.5	-1.56	1438.7	25.78	32.02
45.0	-1.60	1439.1	26.09	32.40
50.2	-1.59	1439.4	26.22	32.57
55.1	-1.55	1439.7	26.25	32.61
60.1	-1.53	1439.8	26.24	32.59
65.4	-1.53	1439.9	26.24	32.59
70.2	-1.53	1440.0	26.23	32.58
75.1	-1.54	1442.0	26.25	32.60
80.1	-1.56	1440.1	26.26	32.62
85.4	-1.61	1439.9	26.24	32.59
90.4	-1.59	1440.1	26.26	32.62
95.3	-1.59	1440.1	26.24	32.59
100.6	-1.62	1440.1	26.25	32.60
110.6	-1.62	1440.3	26.26	32.61
113.9	-1.61	1440.4	26.26	32.62

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
186	X		255	1852	Ship	71 6.5	159 17.9
187		X					

186



187



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
0.7	0.7	8.32	31.102	31.039	24.410	1471.0
3.7	3.7	8.33	31.109	31.039	24.411	1471.0
9.2	9.2	8.32	31.105	31.040	24.414	1471.1
14.7	14.6	8.29	31.097	31.059	24.433	1471.1
20.5	20.4	8.15	31.016	31.092	24.475	1470.7
26.2	26.1	5.85	30.849	31.085	24.493	1470.0
31.1	31.0	1.07	28.888	31.044	24.889	1449.2
36.8	36.8	-1.45	25.487	31.785	25.584	1438.6
42.9	42.7	-0.77	28.510	32.444	26.098	1442.8
49.1	49.8	-0.48	26.737	32.440	26.085	1444.2
54.2	53.8	-0.49	26.736	32.438	26.083	1444.3
59.3	58.9	-0.49	26.738	32.438	26.083	1444.3
64.5	64.1	-0.48	26.745	32.436	26.083	1444.4
69.6	69.2	-0.48	26.743	32.432	26.078	1444.5
70.6	70.2	-0.48	26.750	32.439	26.083	1444.6

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰/OO)
5.2	6.29	1471.2	24.46	31.07
10.7	6.21	1471.1	24.50	31.10
15.8	6.20	1471.1	24.50	31.10
20.4	6.11	1470.9	24.53	31.12
25.5	6.10	1470.9	24.49	31.07
30.3	-1.86	1440.7	25.32	32.47
35.1	-1.11	1442.2	25.00	32.10
40.3	-1.78	1443.7	25.90	32.20
45.5	-1.56	1444.7	26.00	32.34
50.4	-1.55	1444.5	26.05	32.39
55.3	-1.54	1444.5	26.10	32.45
60.5	-1.53	1444.6	26.10	32.46
65.4	-1.52	1444.6	26.11	32.47
70.3	-1.53	1444.6	26.11	32.47
75.4	-1.52	1444.7	26.14	32.50
80.5	-1.53	1444.7	26.12	32.48
84.4	-1.56	1444.7	26.13	32.49

RD-M195 987

COASTAL OCEANOGRAPHY IN THE BEAUFORT SEA SUMMER 1985

3/4

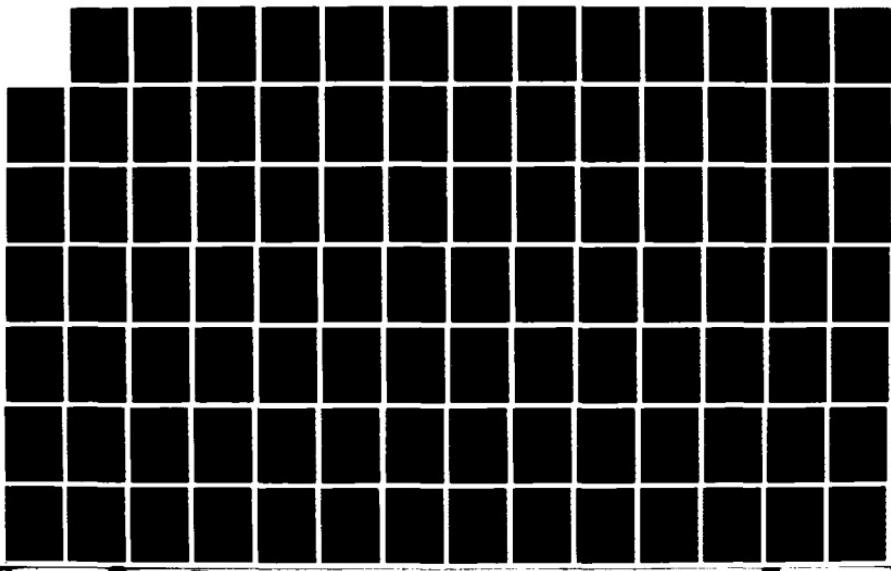
(U) WASHINGTON UNIV SEATTLE APPLIED PHYSICS LAB

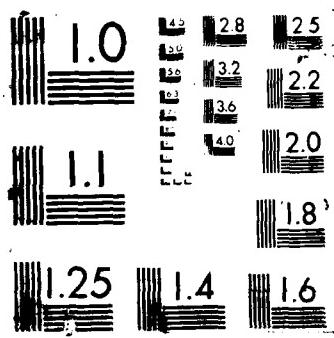
P BECKER ET AL. JUL 87 APL-UW-8785 N00024-85-C-6264

F/Q 8/3

NL

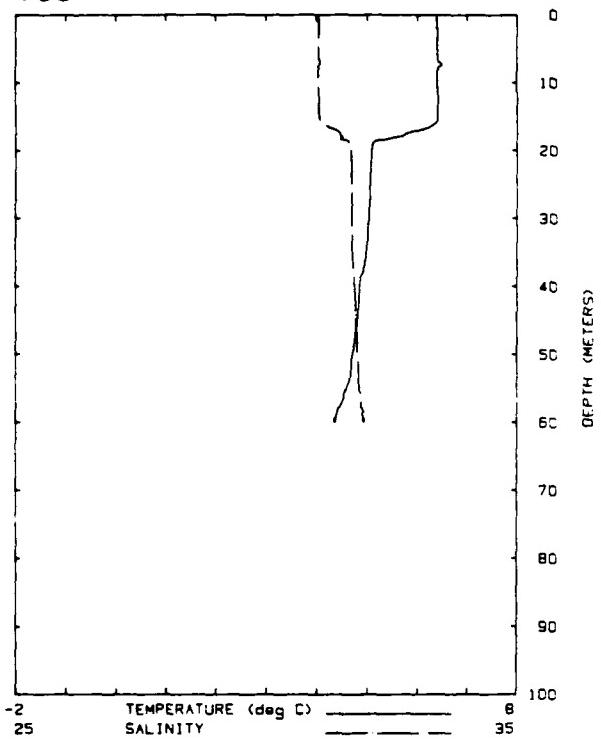
UNCLASSIFIED



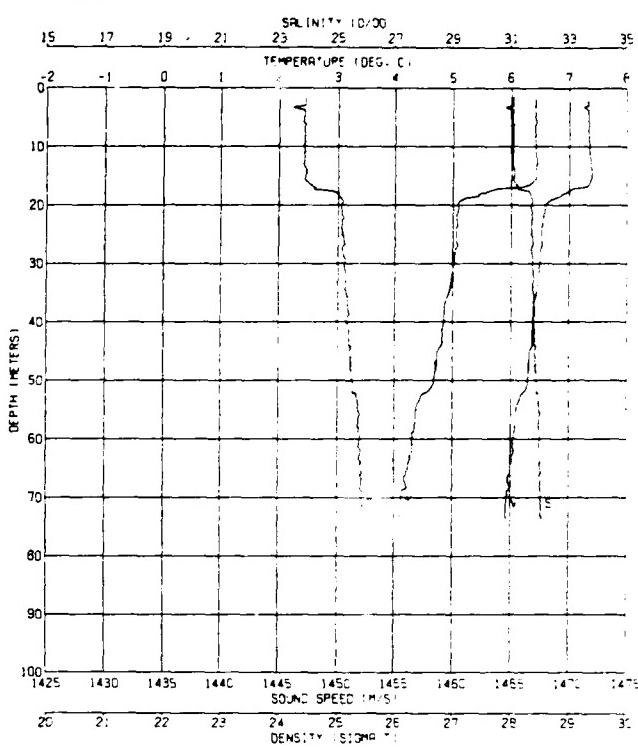


Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
188	X		255	2026	Ship	71 1.3	159 47.3
189		X					

188



189



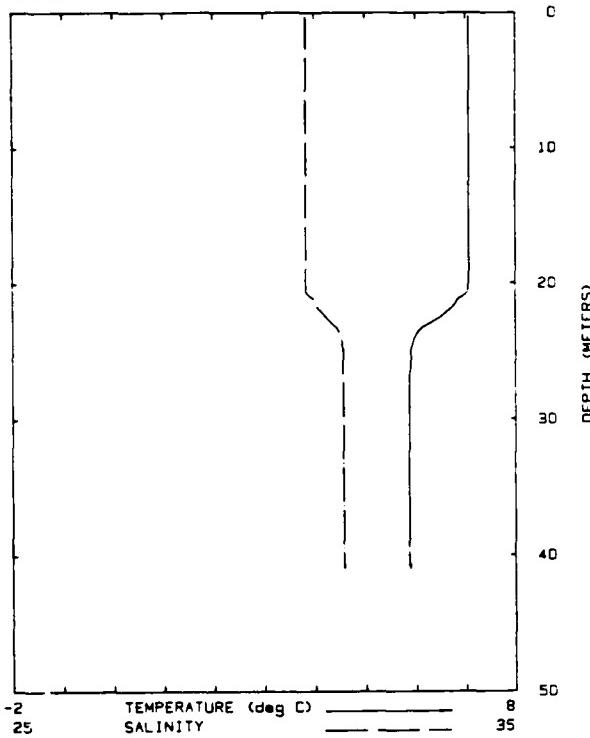
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.2	1.2	6.39	31.157	31.038	24.404	1471.2
4.9	4.9	6.40	31.166	31.040	24.404	1471.3
8.8	8.8	6.40	31.174	31.040	24.403	1471.4
15.9	15.9	6.39	31.185	31.078	24.435	1471.5
21.3	21.2	5.08	30.854	31.885	25.066	1467.1
27.5	27.4	5.05	30.839	31.883	25.076	1467.1
33.9	33.7	4.98	30.808	31.705	25.091	1467.0
38.7	38.4	4.88	30.530	31.736	25.126	1466.6
44.2	44.0	4.81	30.524	31.775	25.165	1466.5
49.3	49.0	4.73	30.483	31.805	25.190	1466.3
53.9	53.6	4.65	30.440	31.831	25.227	1466.0
58.8	58.4	4.40	30.305	31.918	25.320	1465.2
60.0	59.6	4.35	30.278	31.932	25.338	1465.0
60.1	59.7	4.35	30.283	31.936	25.341	1465.0

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (PPT)
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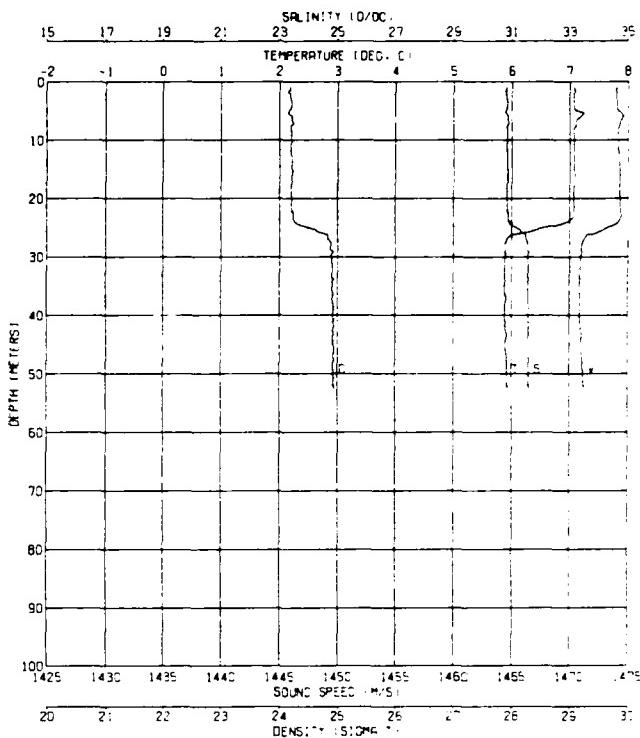
5.2	6.41	1471.7	24.43	31.03
10.7	6.41	1471.8	24.45	31.06
15.0	6.42	1471.9	24.46	31.08
20.5	5.10	1467.9	25.05	31.66
25.1	5.06	1467.6	25.07	31.67
30.3	5.01	1467.4	25.11	31.72
35.3	4.93	1467.2	25.15	31.75
40.1	4.86	1466.9	25.15	31.75
45.5	4.74	1466.6	25.22	31.81
50.0	4.67	1466.4	25.26	31.86
55.2	4.36	1465.4	25.35	31.94
60.2	4.30	1465.2	25.39	31.98
65.2	4.24	1465.0	25.42	32.01
70.2	4.13	1464.7	25.43	32.01
73.7	4.10	1464.6	25.49	32.08

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
190	X		255	2232	Ship	70 51.0	160 35.6
191		X					

190



191



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY

0.6	0.6	7.86	31.521	30.832	24.157	1473.6
2.0	2.0	7.86	31.525	30.831	24.155	1473.7
6.6	6.6	7.87	31.531	30.831	24.155	1473.8
14.4	14.3	7.87	31.533	30.831	24.155	1473.9
19.4	19.3	7.86	31.533	30.834	24.158	1473.9
25.7	25.6	5.88	31.734	31.561	24.874	1478.4
32.0	31.8	5.86	31.213	31.572	24.897	1478.3
38.3	38.1	5.86	31.216	31.573	24.898	1478.4
41.1	40.9	5.89	31.251	31.581	24.891	1478.6
41.6	40.8	5.89	31.248	31.581	24.891	1478.6

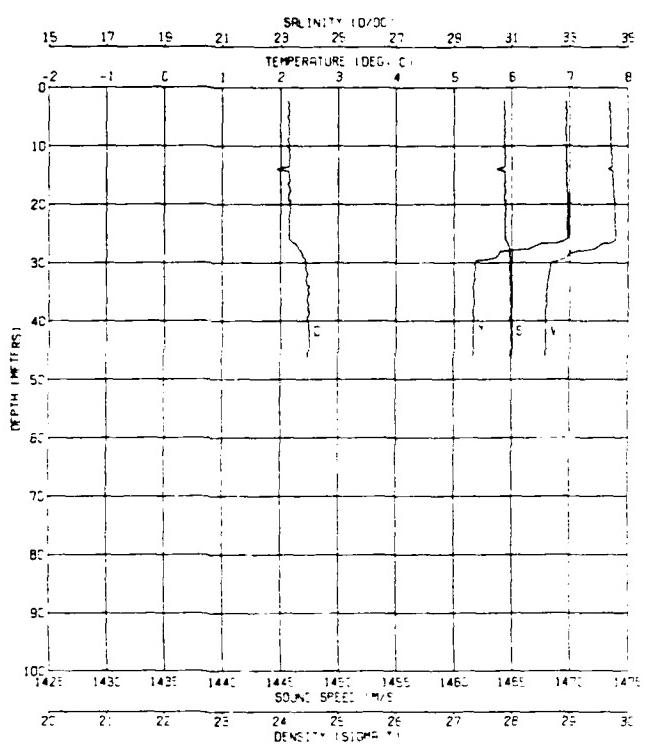
DEPTH (M) T (C) V (M/S) DENSITY S (10/00)

5.4	7.25	1474.5	24.15	30.79
10.4	7.08	1474.2	24.20	30.85
15.1	7.08	1474.3	24.22	30.86
20.3	7.07	1474.3	24.21	30.85
25.4	6.44	1472.9	24.62	31.30
30.5	5.88	1470.9	24.91	31.58
35.0	5.88	1470.9	24.92	31.59
40.1	5.88	1470.9	24.92	31.58
45.1	5.89	1471.0	24.93	31.60
50.2	5.92	1471.2	24.93	31.60
52.5	5.93	1471.2	24.93	31.61

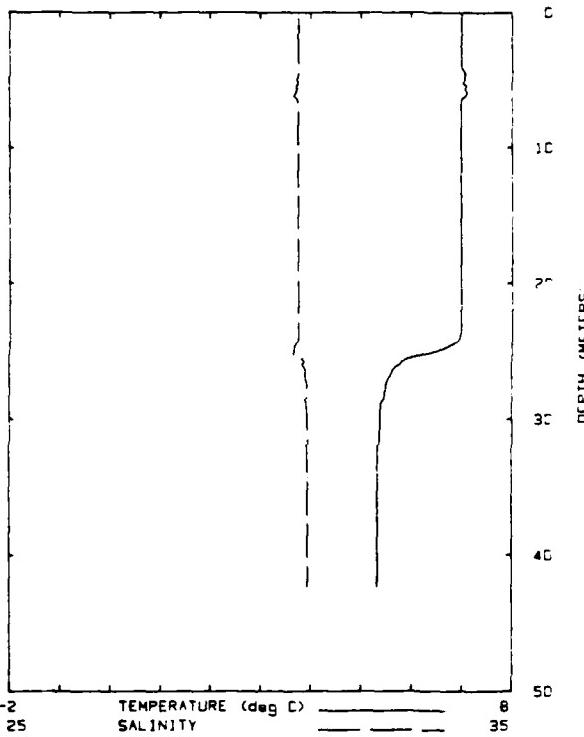
Station ASL Julian GMT  
Number Cast Cast Day hhmm Platform Latitude Longitude

192 X X 256 0205 Ship 70 49.0 160 14.3  
193

192



193



DEPTH (M) T (C) V (m/s) DENSITY S (‰)

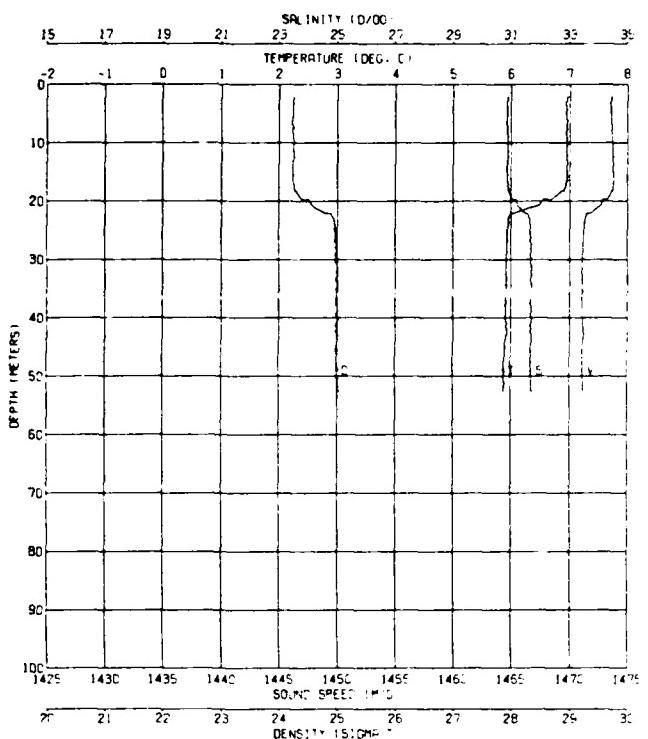
5.5	6.94	1473.5	24.14	30.75
10.3	6.95	1473.5	24.13	30.73
15.0	6.95	1473.6	24.16	30.77
20.3	6.97	1473.8	24.15	30.77
25.1	6.98	1473.9	24.16	30.77
30.3	5.35	1468.4	24.45	30.94
35.1	5.34	1468.1	24.46	30.95
40.5	5.34	1468.0	24.45	30.93
45.0	5.33	1468.0	24.47	30.95
46.4	5.34	1468.0	24.51	31.00

PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dbar) (M) (deg C) (m/s/cm) (‰) (M/sec)

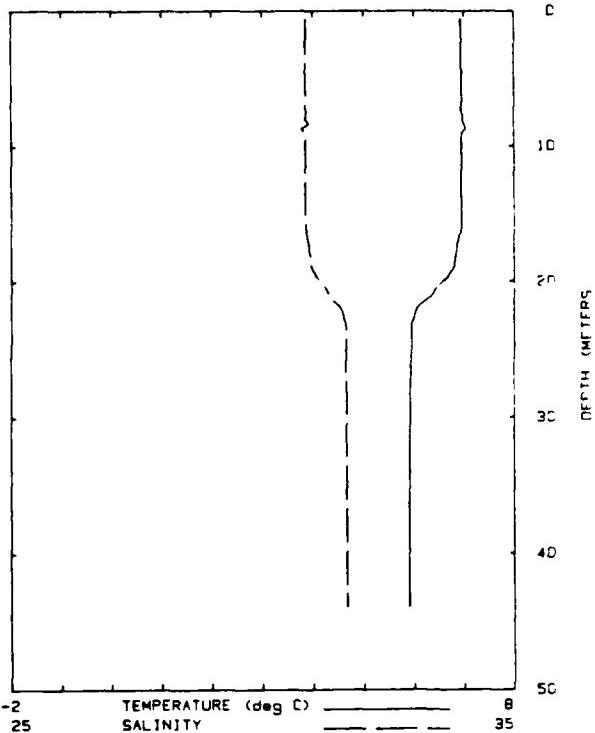
1.4	1.4	8.98	31.390	30.759	24.110	1473.2
0.8	0.8	8.98	31.390	30.758	24.108	1473.2
6.2	6.2	7.09	31.400	30.674	24.030	1473.6
11.6	11.6	8.00	31.395	30.757	24.108	1473.4
16.7	16.7	8.00	31.398	30.758	24.108	1473.5
22.2	22.2	8.00	31.402	30.762	24.112	1473.6
27.8	27.8	9.48	31.321	30.927	24.443	1467.9
33.4	33.4	5.33	30.223	30.850	24.457	1467.4
39.0	39.0	5.33	30.221	30.949	24.457	1467.5
42.1	42.1	5.33	30.221	30.947	24.456	1467.5
41.6	41.6	5.32	30.218	30.951	24.460	1467.5

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
194 195	X	X	256	0309	Ship	70 54.6	160 20.7

194



195



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

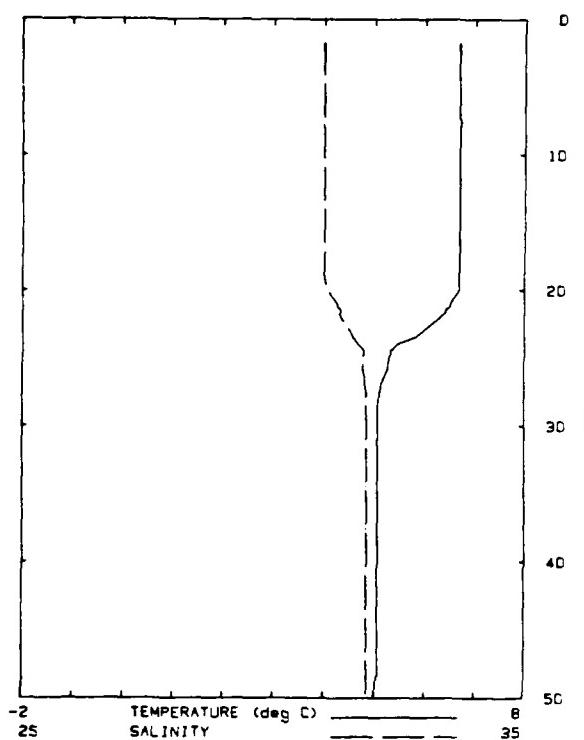
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	6.94	1473.6	24.25	30.88
10.1	6.97	1473.0	24.25	30.89
15.0	6.95	1473.8	24.23	30.86
20.4	6.50	1472.0	24.54	31.21
25.4	5.95	1471.3	24.99	31.69
30.3	5.92	1471.1	24.98	31.68
35.0	5.92	1471.1	24.98	31.67
40.1	5.91	1471.2	25.02	31.72
45.0	5.90	1471.2	25.00	31.69
50.0	5.88	1471.2	25.01	31.70
52.6	5.88	1471.2	25.01	31.70

PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dbar) (m) (deg C) (ms/cm) (0/00) (kg/m³) (m/sec)

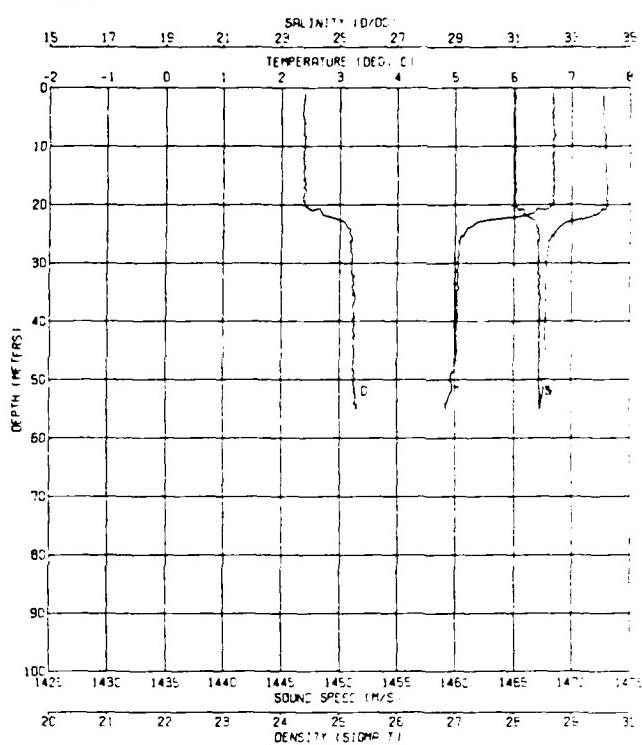
PRESSURE (dbar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY (0/00)	DENSITY (kg/m³)	SOUND VELOCITY (m/sec)
2.5	2.5	6.95	31.454	30.859	24.193	1473.1
7.7	7.6	6.90	31.484	30.864	24.193	1473.4
12.5	12.4	6.94	31.454	30.859	24.193	1473.4
17.5	17.4	6.86	31.456	30.935	24.264	1473.2
22.6	22.7	6.00	31.382	31.818	24.904	1470.8
28.3	28.1	5.91	31.334	31.863	24.953	1470.6
33.6	33.4	5.90	31.331	31.865	24.955	1470.6
39.8	39.5	5.90	31.331	31.868	24.959	1470.7
44.0	43.7	5.90	31.330	31.867	24.958	1470.8
44.2	43.8	5.89	31.330	31.868	24.959	1470.8

Station ASL APL Julian GMT Platform Latitude Longitude  
 Number Cast Cast Day hhmm Ship 70 57.7 160 23.2  
 196 X 256 0347  
 197 X

196



197

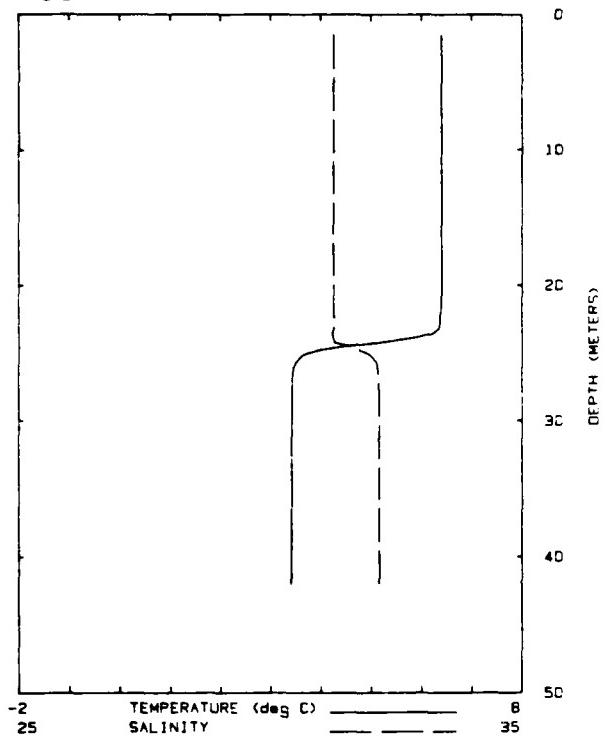


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.8	4.8	8.89	31.363	30.995	24.333	1472.4
10.3	10.2	8.68	31.367	30.999	24.337	1472.5
15.9	15.8	8.59	31.379	31.003	24.338	1472.6
21.4	21.3	8.50	31.462	31.266	24.571	1472.3
27.6	27.5	5.11	30.808	31.831	25.178	1467.5
33.3	33.2	5.06	30.786	31.847	25.195	1467.4
38.8	38.5	5.06	30.785	31.846	25.195	1467.5
45.3	45.1	5.06	30.791	31.848	25.197	1467.6
51.4	51.1	5.02	30.771	31.859	25.200	1467.6
51.4	51.1	5.03	30.762	31.836	25.190	1467.6

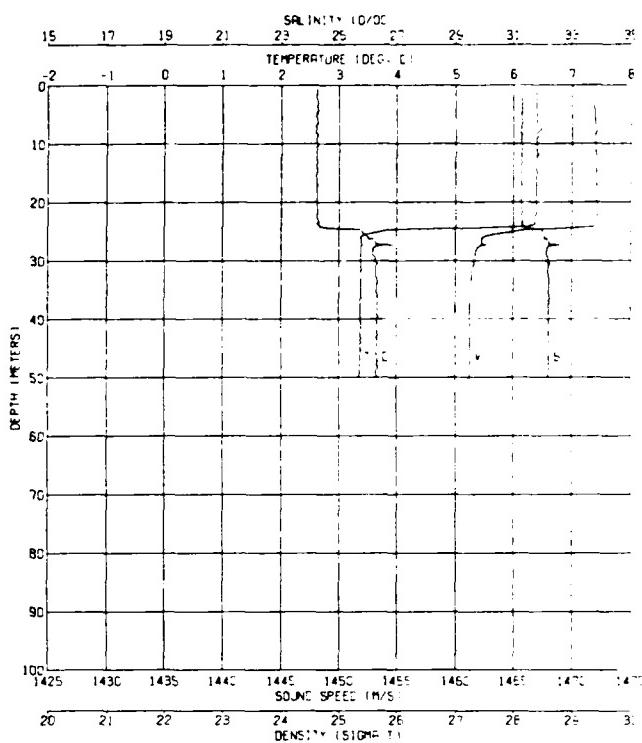
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (C/00)
5.2	6.69	1472.8	24.38	31.02
10.7	6.69	1472.9	24.39	31.03
15.5	6.69	1473.0	24.39	31.03
20.1	6.69	1473.1	24.40	31.04
25.1	5.15	1468.6	25.17	31.82
30.5	5.05	1467.9	25.17	31.82
35.4	5.03	1467.8	25.21	31.84
40.1	5.03	1467.8	25.23	31.87
45.3	5.04	1467.8	25.21	31.85
50.2	4.94	1467.5	25.25	31.88
55.1	4.84	1467.3	25.29	31.92
55.1	4.84	1467.3	25.29	31.92

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
198	X		256	0421	Ship	71 0.5	160 26.8
199		X					

198



199

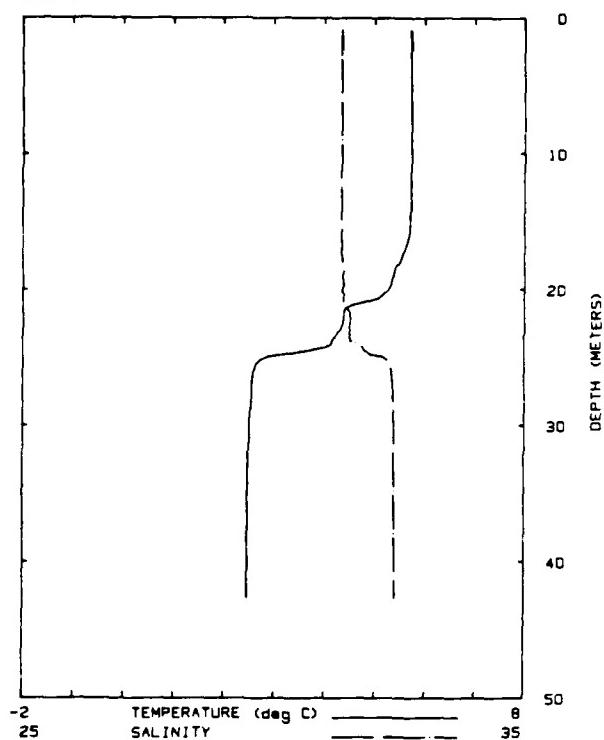


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
7.4	7.4	8.40	31.367	31.257	24.574	1471.7
12.0	12.7	8.40	31.374	31.259	24.576	1471.8
16.5	18.4	8.40	31.376	31.259	24.576	1471.9
23.0	23.6	8.21	31.183	31.231	24.578	1471.1
28.9	28.7	3.43	29.895	32.159	25.606	1460.9
34.2	34.0	3.42	29.895	32.165	25.612	1461.0
38.2	39.0	3.42	29.894	32.165	25.611	1461.1
41.0	41.7	3.62	29.894	32.165	25.612	1461.1

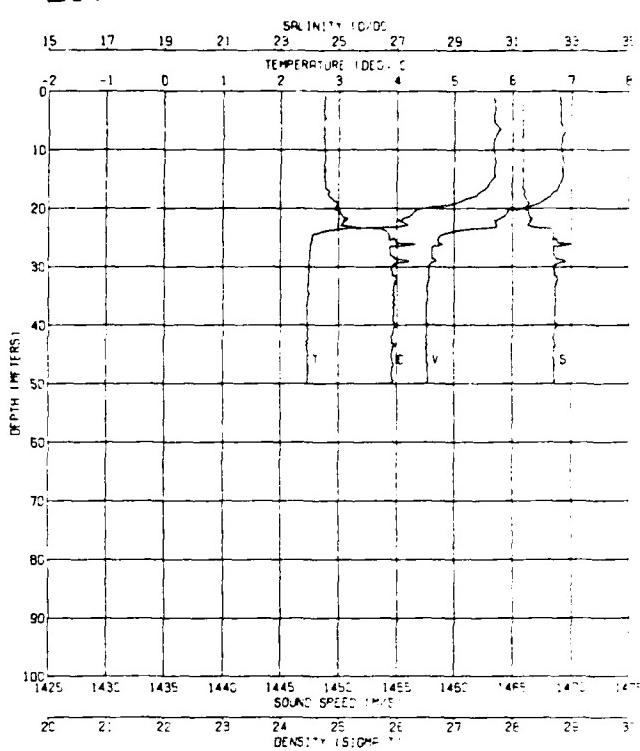
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.2	6.41	1472.0	24.60	31.25
10.3	6.40	1472.1	24.64	31.31
15.1	6.41	1472.1	24.62	31.28
20.1	6.39	1472.2	24.65	31.31
25.9	3.25	1462.3	25.56	32.13
30.1	3.38	1461.8	25.56	32.11
35.0	3.38	1461.5	25.59	32.14
40.1	3.39	1461.4	25.61	32.15
45.0	3.37	1461.3	25.63	32.18
50.0	3.36	1461.4	25.68	32.24
50.0	3.36	1461.4	25.68	32.24

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
200 201	X	X	256	0455	Ship	71 4.1	160 28.2

200



201

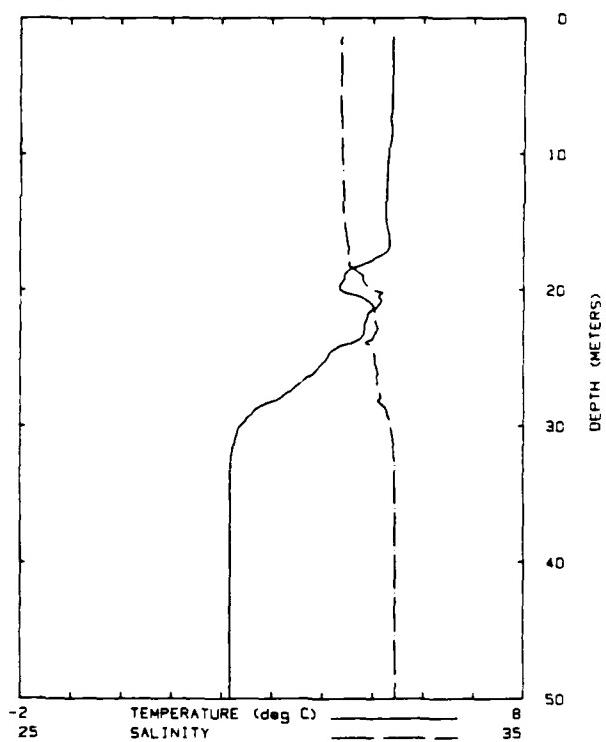


PRESSURE (dbar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
2.0	2.0	5.72	30.875	31.338	24.719	1469.0
4.3	4.2	5.72	30.872	31.339	24.721	1469.0
9.4	9.4	5.73	30.882	31.340	24.720	1469.1
15.2	15.1	5.70	30.871	31.347	24.729	1469.1
20.5	20.4	5.17	30.474	31.304	24.826	1467.1
25.5	25.4	2.87	29.187	32.277	25.765	1457.8
30.6	30.4	2.51	29.120	32.382	25.861	1457.3
36.1	35.9	2.48	29.106	32.398	25.877	1457.3
41.0	40.8	2.46	29.102	32.404	25.883	1457.3
42.6	42.4	2.46	29.104	32.406	25.884	1457.3

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (PPT)
5.2	5.69	1469.1	24.75	31.34
10.1	5.68	1469.2	24.76	31.36
15.3	5.65	1469.2	24.77	31.36
20.3	4.66	1465.9	24.78	31.27
25.2	2.53	1458.7	25.83	32.37
30.1	2.50	1458.1	25.87	32.40
35.4	2.48	1457.8	25.90	32.43
40.3	2.47	1457.7	25.92	32.46
45.1	2.49	1457.7	25.89	32.41
50.0	2.47	1457.7	25.92	32.45

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
202	X		256	0527	Ship	71 6.1	160 33.8

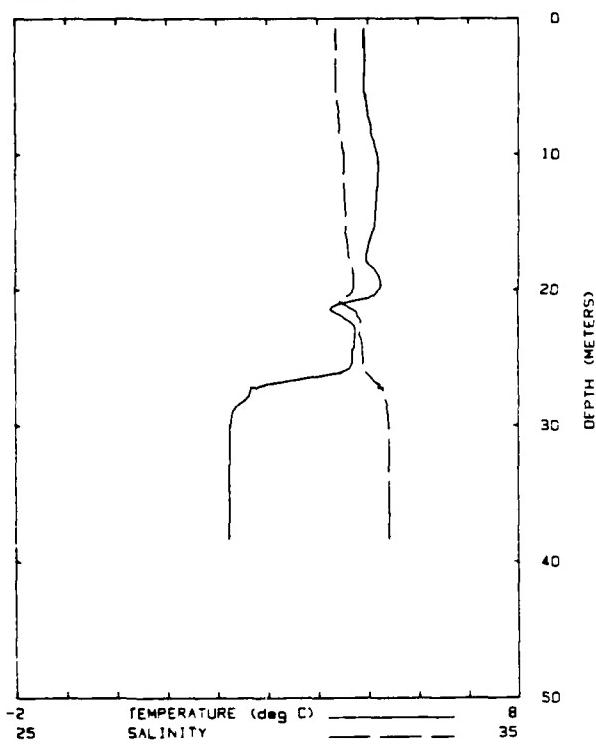
202



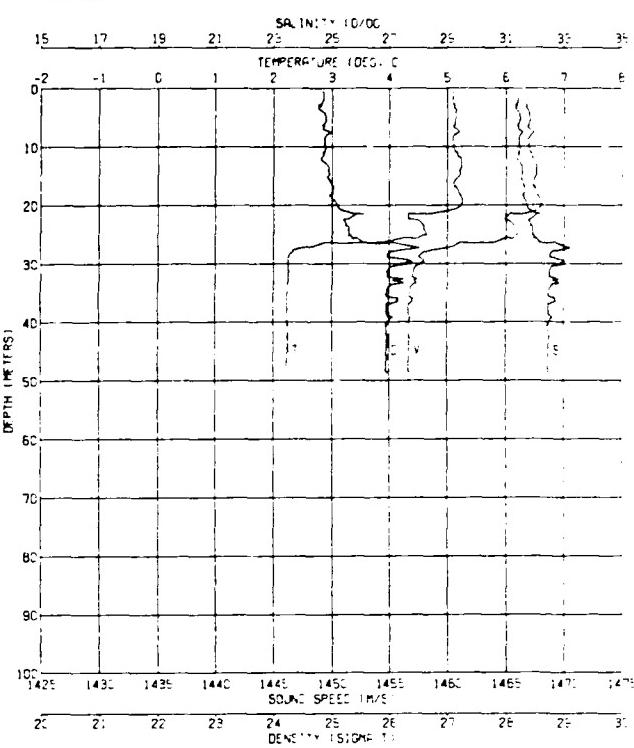
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.3	8.2	5.36	30.613	31.375	24.789	1467.7
13.6	13.5	5.25	30.560	31.418	24.834	1467.3
18.8	18.7	4.47	30.183	31.724	25.161	1464.6
24.3	24.1	4.36	30.286	31.058	25.357	1464.5
29.0	29.5	2.91	30.072	32.320	25.810	1457.2
34.0	34.6	2.17	26.894	32.444	25.937	1456.0
40.2	39.8	2.17	26.895	32.447	25.939	1456.0
45.6	45.3	2.17	26.887	32.447	25.939	1456.1
51.1	50.8	2.17	26.800	32.451	25.943	1456.2
52.3	52.0	2.17	26.801	32.451	25.943	1456.2

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
204	X		256	0559	Ship	71 8.9	160 37.1
205		X					

204



205



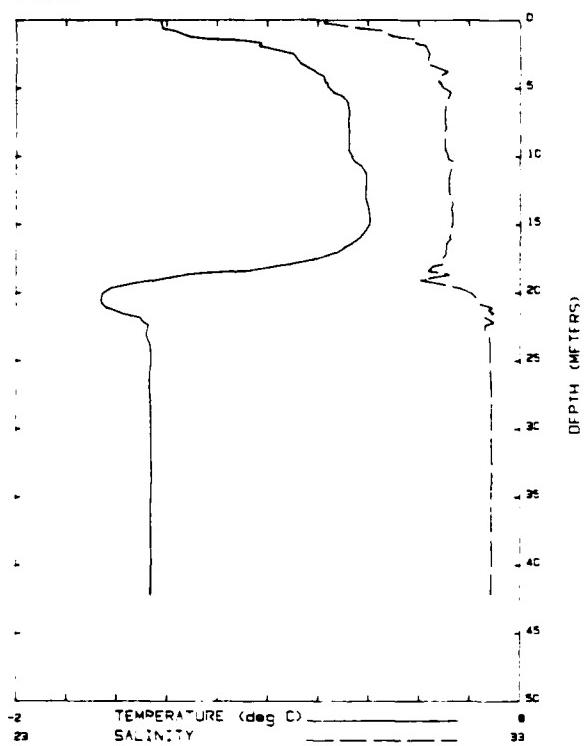
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY (M/sec.)	SOUND VELOCITY (M/sec.)
5.7	5.6	4.95	30.256	31.362	24.825	1465.9
10.3	10.2	5.19	30.584	31.518	24.922	1467.1
15.0	14.8	5.13	30.572	31.548	24.952	1467.0
19.8	19.7	5.25	30.813	31.706	25.063	1467.8
24.4	24.3	4.71	30.522	31.886	25.264	1465.9
28.7	28.5	2.40	29.018	32.372	25.862	1456.8
33.1	32.8	2.24	28.923	32.412	25.807	1456.2
37.0	36.8	2.23	28.920	32.414	25.808	1456.2
38.4	38.2	2.23	28.919	32.413	25.807	1456.3
38.5	38.2	2.23	28.918	32.413	25.808	1456.3

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰/00)
5.5	5.15	1467.1	24.91	31.48
10.3	5.11	1467.0	24.90	31.46
15.0	5.20	1467.5	24.93	31.51
20.4	5.20	1468.0	25.10	31.73
25.1	4.63	1465.9	25.29	31.89
30.1	2.26	1457.9	26.39	33.03
35.1	2.24	1456.7	25.94	32.46
40.2	2.24	1456.7	25.96	32.48
45.0	2.26	1456.7	25.94	32.46
48.7	2.24	1456.7	25.99	32.51

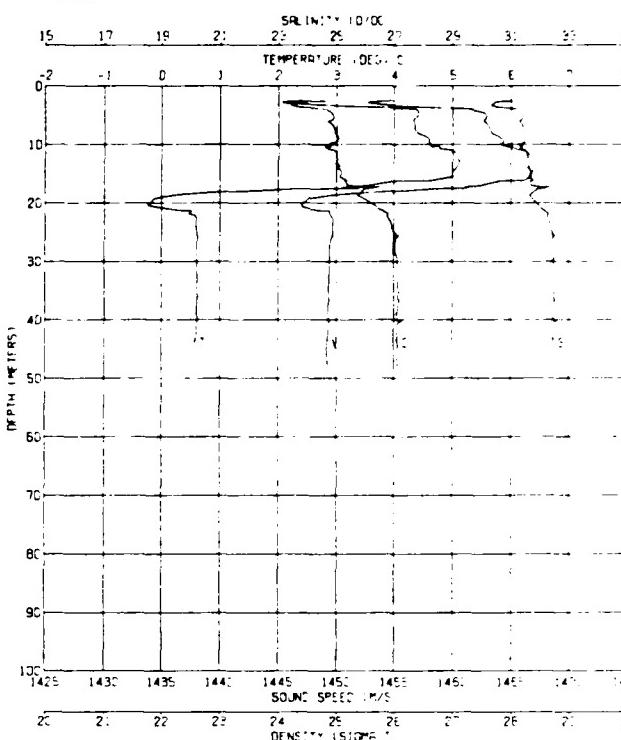
Station ASL Julian GMT  
Number Cast Cast Day hhmm Platform Latitude Longitude

206 X 256 0630 Ship 71 11.6 160 40.1  
207 X

206



207

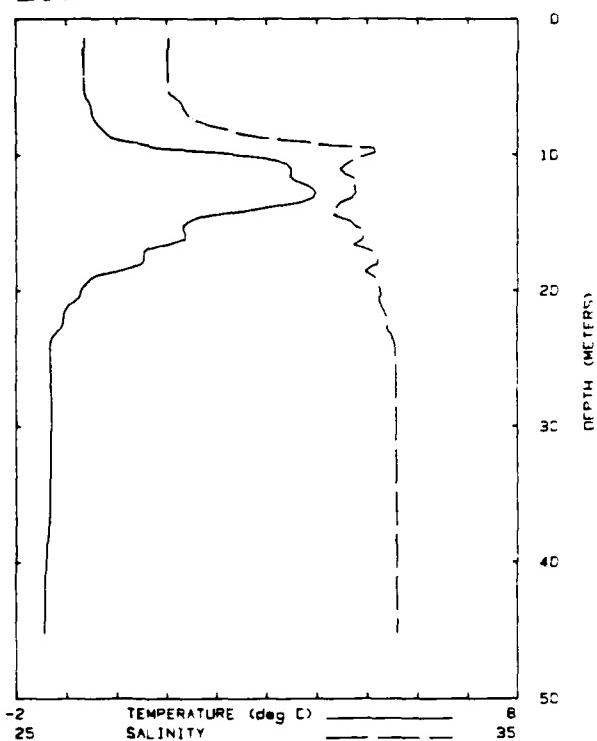


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (M/sec)
11.0	11.7	4.54	30.178	31.559	25.013	1445.0
17.1	17.0	5.00	30.561	31.651	25.047	1446.7
22.1	22.0	-0.20	26.801	32.064	25.774	1444.2
27.4	27.3	0.68	27.642	32.411	26.007	1445.1
33.0	32.8	0.89	27.665	32.428	26.021	1445.3
39.9	39.7	0.88	27.665	32.436	26.027	1445.4
44.2	44.0	0.67	27.864	32.434	26.026	1445.4
44.3	44.0	0.68	27.870	32.435	26.026	1445.5

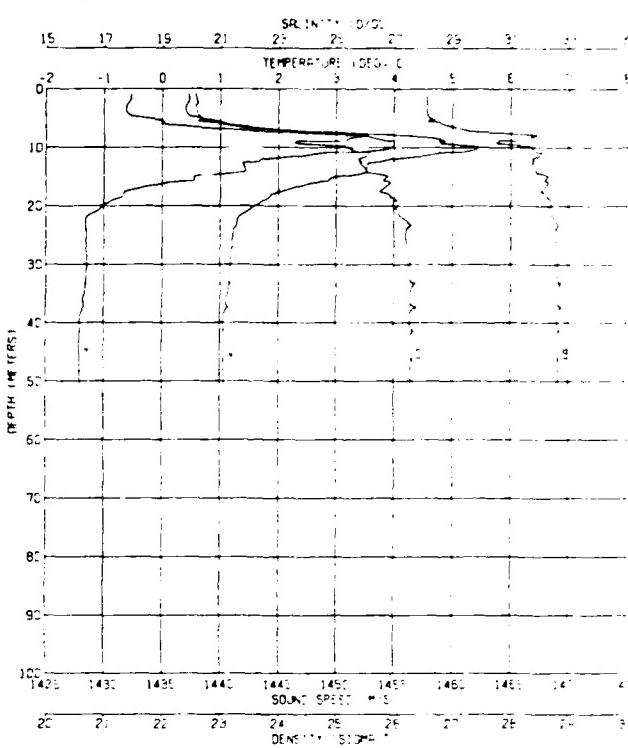
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (1/C/00)
5.2	4.50	1463.1	24.88	31.33
10.1	4.62	1464.2	24.95	31.44
15.0	5.02	1466.8	25.12	31.72
20.4	-3.32	1447.0	25.68	31.98
25.1	.61	1450.0	25.95	32.35
30.2	.62	1449.6	25.97	32.37
35.3	.62	1449.5	26.04	32.45
40.1	.62	1449.5	26.02	32.43
45.3	.57	1449.3	26.04	32.45
48.5	.58	1449.4	26.06	32.48

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
208	X		256	0713	Helo	71 16.7	160 42.8
209		X					

208



209



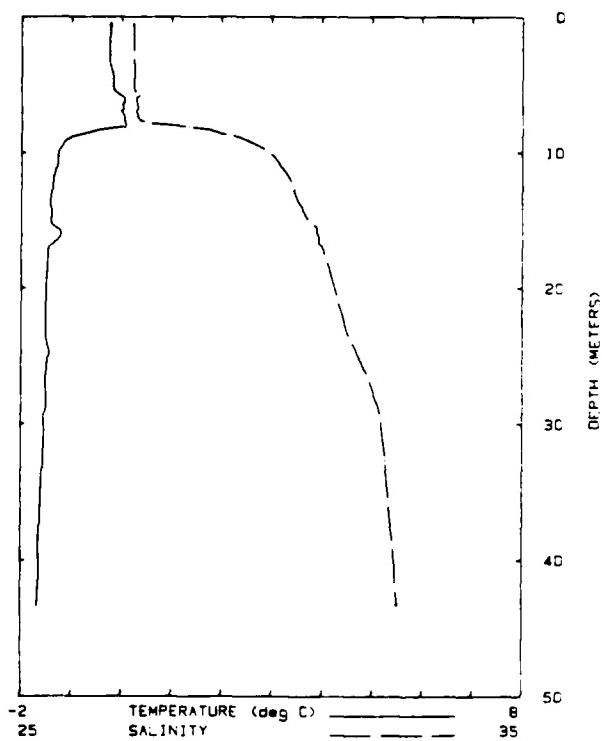
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	sound velocity (m/sec)
2.2	2.2	-0.84	23.277	28.033	22.537	1436.8
5.0	5.0	-0.59	23.432	28.191	22.663	1437.2
12.0	11.9	3.57	29.501	31.808	25.315	1461.8
17.0	17.7	0.54	27.378	32.215	25.857	1446.1
23.0	23.2	-1.23	26.181	32.478	26.139	1440.3
29.0	29.1	-1.28	26.182	32.575	26.220	1440.3
35.0	35.0	-1.33	26.164	32.586	26.229	1440.2
41.0	41.0	-1.41	26.106	32.588	26.242	1435.9
45.0	45.1	-1.43	26.102	32.604	26.247	1425.6
45.2	44.9	-1.43	26.102	32.602	26.245	1439.9

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (PPT)
5.4	-1.12	1439.2	22.89	32.48
10.1	3.97	1461.9	25.31	31.82
15.1	-1.48	1449.6	25.88	32.26
20.3	-1.05	1442.9	25.98	32.30
25.2	-1.30	1441.3	26.11	32.44
30.2	-1.20	1441.1	26.16	32.53
35.0	-1.34	1440.8	26.20	32.55
40.3	-1.42	1440.4	26.22	32.57
45.1	-1.43	1440.3	26.23	32.59
50.4	-1.42	1440.4	26.26	32.62
50.4	-1.42	1440.4	26.26	32.62

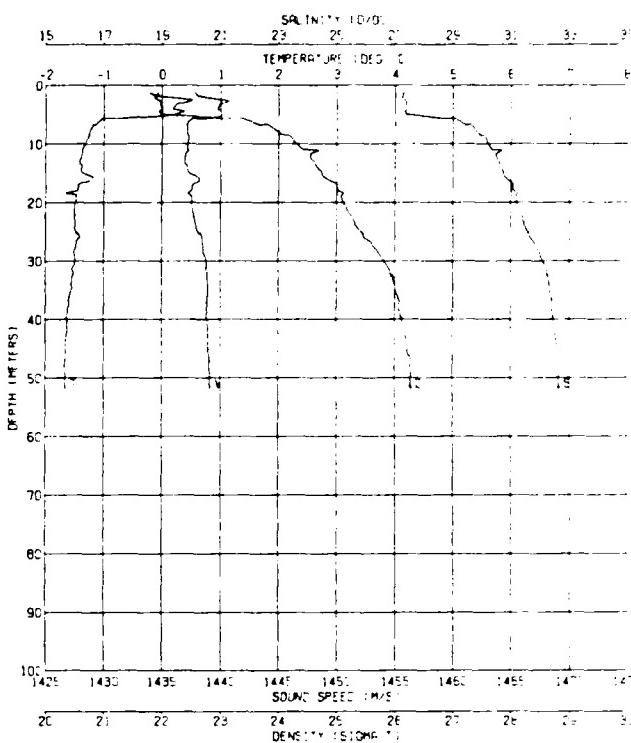
Station ASL APL Julian GMT  
Number Cast Cast Day hhmm Platform Latitude Longitude

210 X 256 1447 Helo 71 36.9 159 7.3  
211 X

210



211



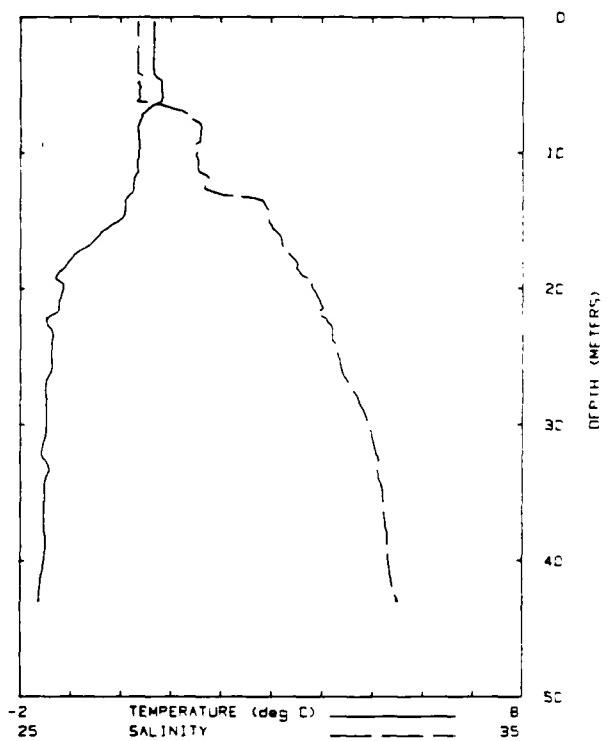
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (m/sec)
0.8	0.6	-0.21	22.871	27.243	21.891	1437.7
0.7	0.7	-0.22	22.867	27.244	21.891	1437.7
4.5	4.5	-0.16	23.018	27.255	21.895	1438.0
8.7	8.7	-1.20	24.207	29.806	23.979	1438.6
14.9	14.9	-1.40	24.720	30.899	24.705	1437.0
20.0	19.9	-1.50	25.038	31.242	25.146	1437.3
25.8	25.5	-1.48	25.453	31.703	25.584	1436.2
31.5	31.3	-1.55	25.728	32.230	25.947	1438.6
37.0	36.8	-1.62	25.768	32.360	26.053	1438.5
42.3	42.1	-1.65	25.833	32.477	26.149	1438.6
43.5	43.3	-1.66	25.848	32.513	26.179	1438.6
43.6	43.3	-1.66	25.849	32.515	26.180	1438.6

DEPTH (M) T (C) V (M/S) DENSITY S (1/oo)

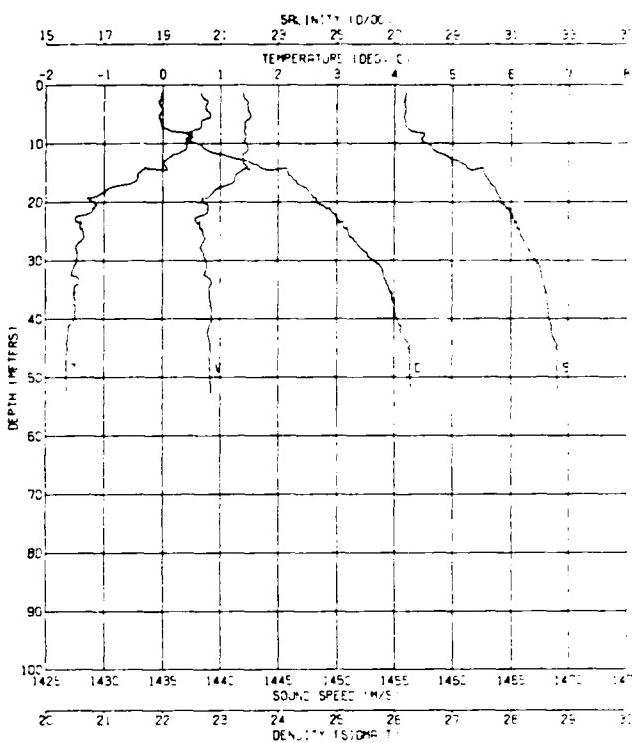
5.2	.01	1440.1	22.51	26.02
10.3	-1.33	1437.1	24.34	30.25
15.3	-1.27	1437.6	24.74	30.75
20.1	-1.49	1437.5	25.12	31.21
25.4	-1.47	1438.1	25.42	31.58
30.1	-1.49	1438.8	25.81	32.06
35.1	-1.56	1438.9	26.01	32.31
40.5	-1.62	1438.9	26.12	32.44
45.0	-1.66	1438.9	26.21	32.56
50.2	-1.66	1439.1	26.27	32.62
51.6	-1.66	1439.1	26.28	32.63

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
212	X		256	1555	Ship	71 31.5	159 2.2
213		X					

212



213



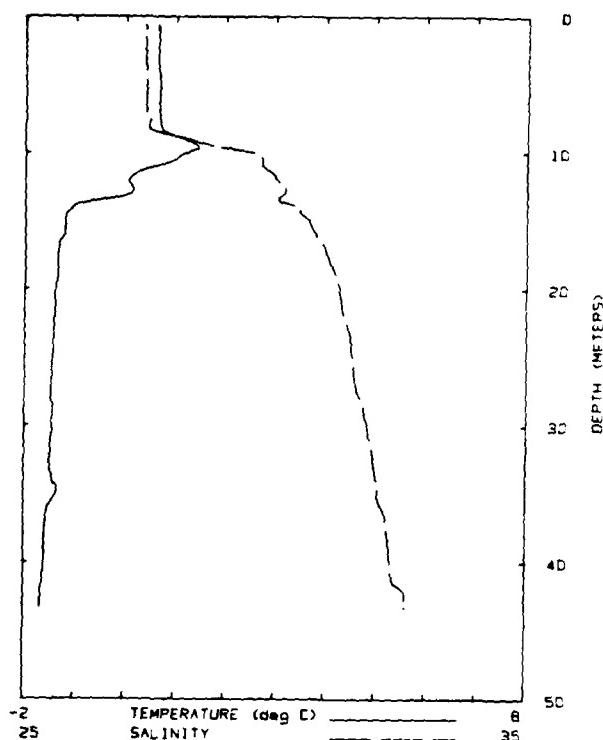
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY_ (m/sec)
0.7	0.7	0.67	23.864	27.349	21.847	1441.0
2.3	2.3	0.66	23.861	27.346	21.847	1441.0
7.5	7.5	0.43	24.297	28.385	22.772	1442.3
12.7	12.7	0.26	24.422	28.679	23.030	1442.0
17.9	17.9	-0.97	24.865	30.447	24.492	1438.7
23.1	23.0	-1.38	25.113	31.218	25.124	1437.9
28.3	28.4	-1.47	25.432	31.740	25.548	1438.2
34.6	34.6	-1.52	25.723	32.195	25.918	1438.7
40.8	40.8	-1.56	25.814	32.357	26.050	1438.9
47.0	43.0	-1.64	25.863	32.510	26.176	1436.7

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (PPT)
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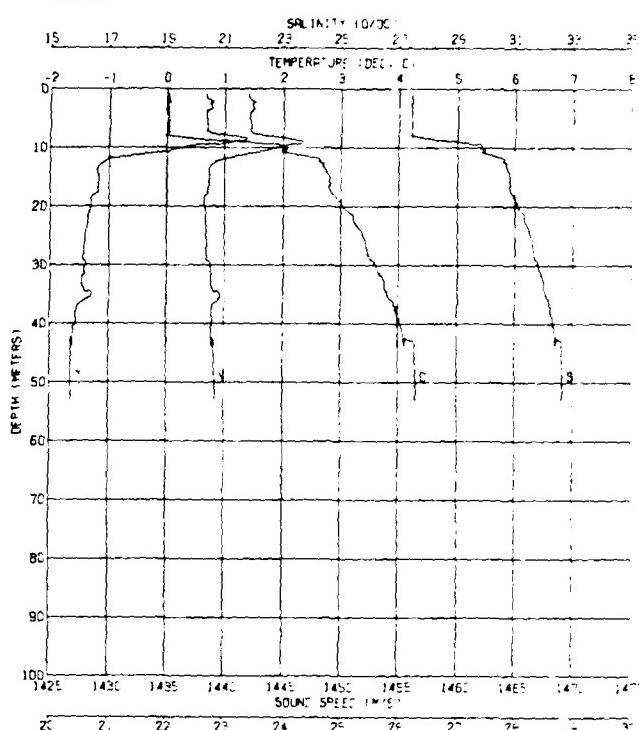
5.1	.83	1442.6	21.96	27.36
10.1	-.40	1442.2	22.67	28.23
15.3	-.40	1441.7	24.10	29.99
20.4	-1.16	1438.9	24.72	30.72
25.5	-1.36	1438.7	25.16	31.27
30.3	-1.47	1439.0	25.65	31.87
35.3	-1.52	1439.1	25.92	32.18
40.1	-1.50	1439.4	26.03	32.33
45.0	-1.65	1439.2	26.23	32.58
50.2	-1.65	1439.2	26.26	32.62
52.7	-1.65	1439.2	26.27	32.63

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
214	X		256	1647	Ship	71 28.1	158 59.5
215		X					

214



215



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOND VELOCITY (m/sec)
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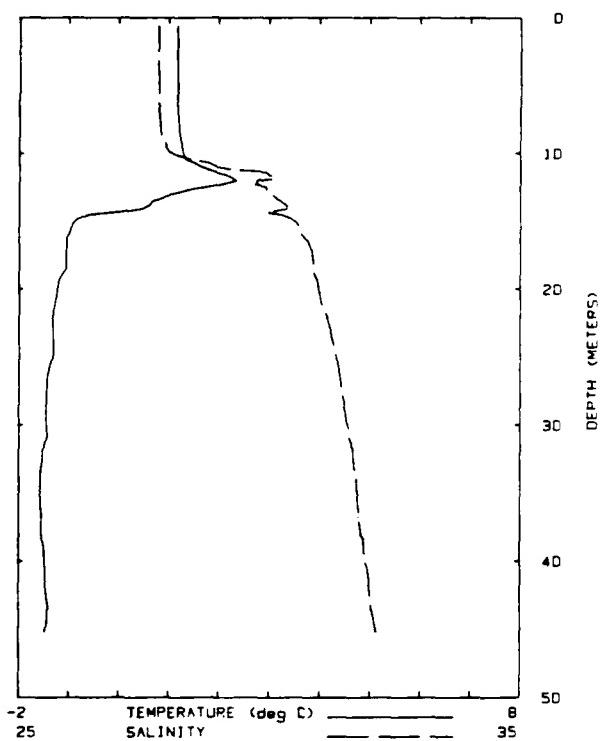
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOND VELOCITY (m/sec)
2.5	2.5	0.65	23.694	27.400	21.989	1442.0
7.0	7.0	0.66	23.708	27.405	21.992	1442.1
12.0	11.9	0.11	25.341	30.011	24.105	1442.1
17.0	16.6	-1.32	24.890	30.986	24.837	1437.8
22.0	22.0	-1.38	25.228	31.382	25.257	1438.1
28.0	27.8	-1.47	25.391	31.661	25.501	1438.2
33.8	33.7	-1.44	25.658	32.014	25.770	1438.9
39.9	39.7	-1.58	25.743	32.294	25.991	1438.6
43.5	43.2	-1.86	25.830	32.621	26.266	1438.8
43.5	43.3	-1.66	25.830	32.621	26.266	1438.8

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (10/00)
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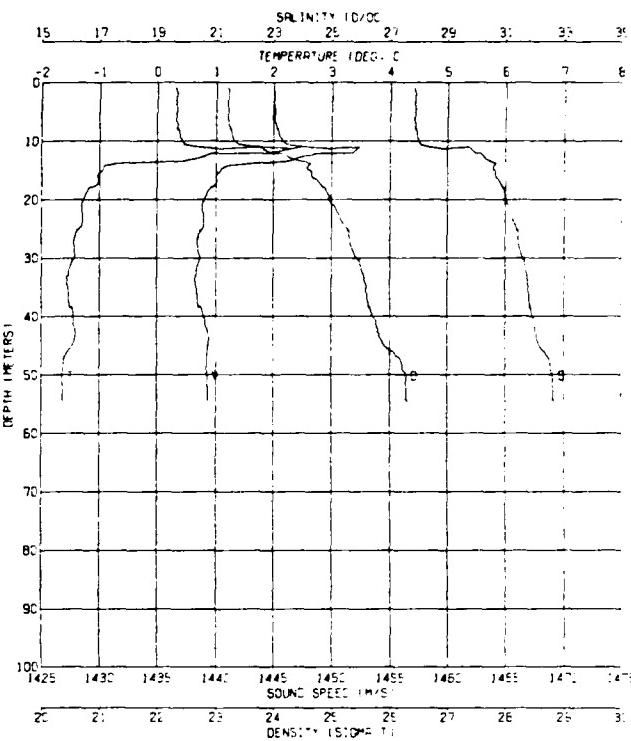
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (10/00)
5.1	.68	1442.1	22.02	27.43
10.4	.08	1443.7	24.09	29.99
15.1	-1.19	1438.7	24.82	30.84
20.3	-1.32	1438.3	25.06	31.14
25.2	-1.42	1438.4	25.40	31.55
30.1	-1.42	1438.8	25.60	31.80
35.5	-1.32	1439.7	25.83	32.09
40.2	-1.59	1439.0	26.04	32.34
45.0	-1.65	1439.1	26.29	32.65
50.3	-1.65	1439.2	26.32	32.69
53.0	-1.65	1439.3	26.33	32.70

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 216 X 256 1723 Ship 71 25.1 158 56.2  
 217 X

216



217

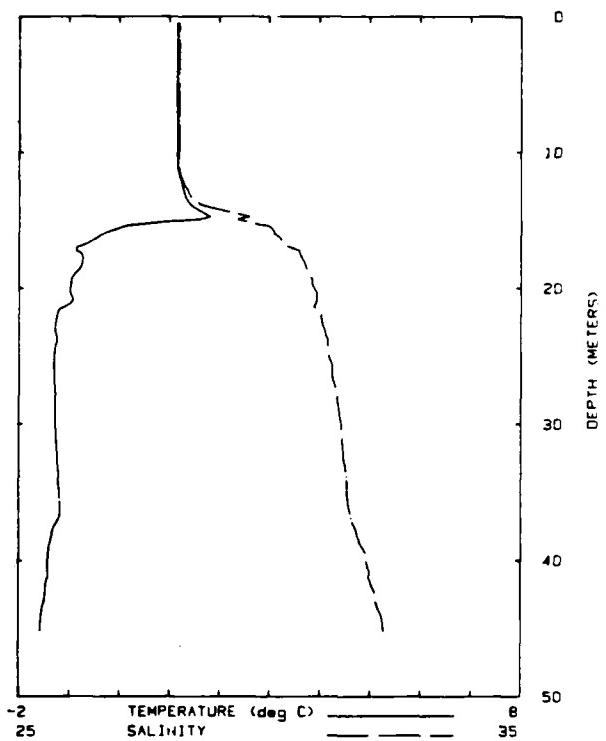


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
2.7	2.7	1.17	24.371	27.780	22.279	1444.9
7.8	7.7	1.21	24.442	27.830	22.316	1445.2
12.8	12.7	1.42	26.284	29.961	24.002	1449.0
18.2	18.1	-1.05	25.116	30.878	26.841	1438.9
23.5	23.3	-1.30	25.188	31.235	25.136	1438.3
28.0	28.7	-1.44	25.276	31.497	25.351	1438.1
33.0	34.8	-1.59	25.355	31.745	25.555	1437.9
41.1	40.8	-1.47	25.606	31.868	25.734	1438.8
45.3	45.1	-1.47	25.732	32.137	25.870	1439.1
45.5	45.2	-1.47	25.732	32.137	25.870	1439.1

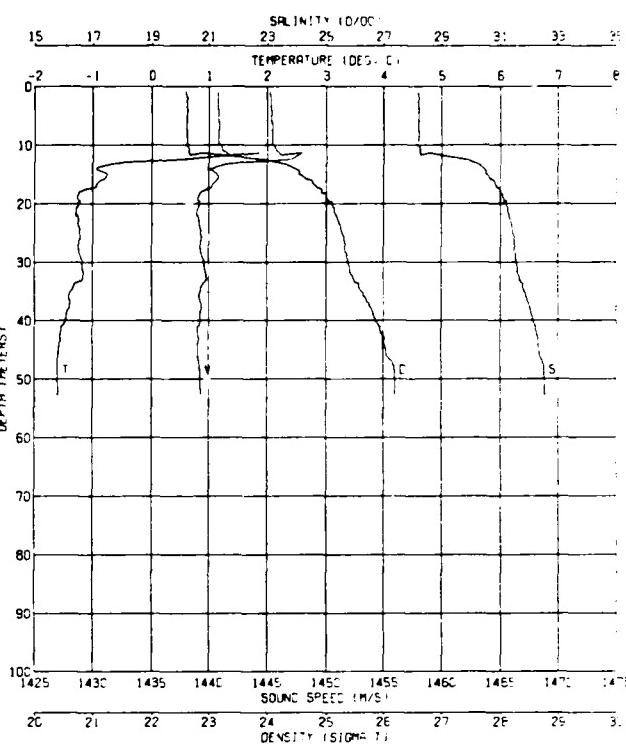
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (P/00)
5.1	1.22	1445.1	22.33	27.85
10.5	1.39	1446.1	22.47	28.04
15.1	-0.97	1440.4	24.66	30.66
20.3	-1.28	1438.9	24.98	31.05
25.4	-1.39	1438.7	25.28	31.41
30.3	-1.44	1438.6	25.47	31.64
35.0	-1.54	1438.4	25.61	31.81
40.3	-1.46	1439.0	25.74	31.98
45.3	-1.49	1439.3	25.93	32.21
50.0	-1.64	1439.3	26.27	32.62
54.5	-1.64	1439.3	26.30	32.66

Station Number	ASL Cast	APL Cast	Julian Day	GMT hmmm	Platform	Latitude	Longitude
218	X		256	1803	Ship	71 22.3	158 52.9
219		X					

218



219

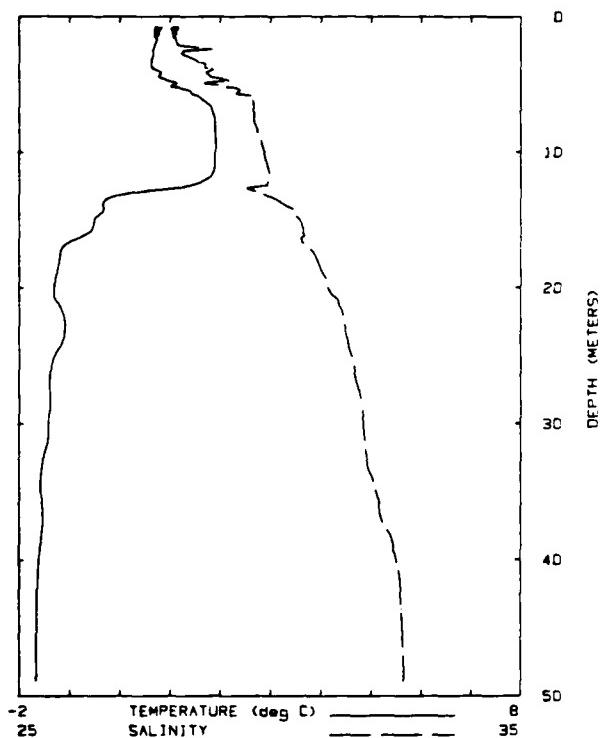


PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec.)
2.6	2.6	1.16	24.682	28.186	22.606	1445.4
7.8	7.8	1.17	24.895	28.195	22.603	1445.5
12.9	12.8	1.29	24.929	28.380	22.745	1446.3
18.1	18.0	-0.72	25.212	30.673	24.668	1442.2
23.1	23.0	-1.20	25.104	31.094	25.022	1432.2
28.4	28.2	-1.26	25.315	31.362	25.238	1438.7
33.6	33.4	-1.22	25.464	31.512	25.358	1439.2
38.7	38.5	-1.36	25.548	31.778	25.577	1439.0
44.1	43.8	-1.54	25.718	32.203	25.925	1438.8
45.4	45.2	-1.57	25.745	32.273	25.982	1438.8

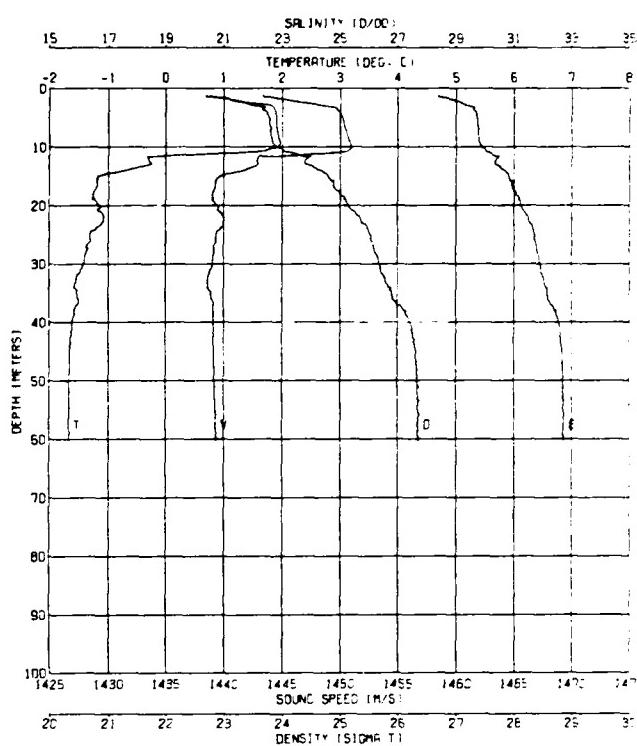
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
5.5	1.16	1445.4	22.61	28.20
11.0	1.23	1445.8	22.67	28.27
15.3	-1.74	1440.9	24.58	30.57
20.5	-1.23	1439.4	25.05	31.13
25.1	-1.24	1439.4	25.24	31.36
30.2	-1.17	1439.8	25.36	31.51
35.3	-1.39	1439.3	25.62	31.83
40.1	-1.47	1439.3	25.85	32.11
45.4	-1.59	1439.1	26.03	32.33
50.3	-1.61	1439.3	26.19	32.52
52.9	-1.61	1439.4	26.20	32.54

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
220	X		256	1838	Ship	71 19.5	158 50.3
221		X					

220



221

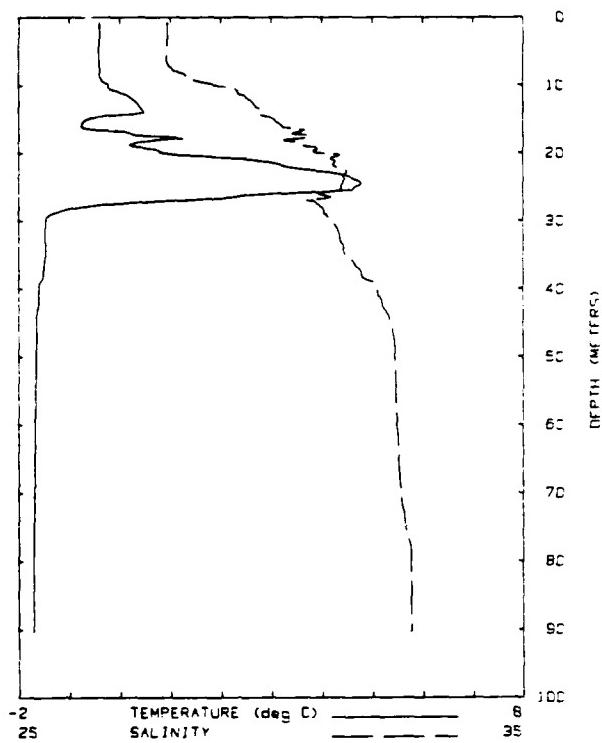


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.3	1.3	0.71	24.389	28.099	22.547	1443.2
3.5	3.5	0.82	24.708	28.715	23.045	1443.6
6.2	6.2	1.90	26.464	29.718	23.779	1450.8
13.0	12.9	0.80	25.454	29.679	23.819	1445.0
17.7	17.6	-1.19	25.013	30.884	24.850	1436.3
22.5	22.3	-1.10	25.500	31.449	25.305	1439.5
27.2	27.0	-1.40	25.487	31.713	25.525	1438.5
32.1	31.9	-1.47	25.535	31.883	25.865	1438.5
37.6	37.4	-1.54	25.746	32.239	25.954	1438.8
43.1	42.8	-1.85	25.919	32.595	26.245	1438.8
48.4	48.2	-1.66	25.946	32.648	26.288	1438.9
48.8	48.6	-1.67	25.948	32.652	26.291	1438.9

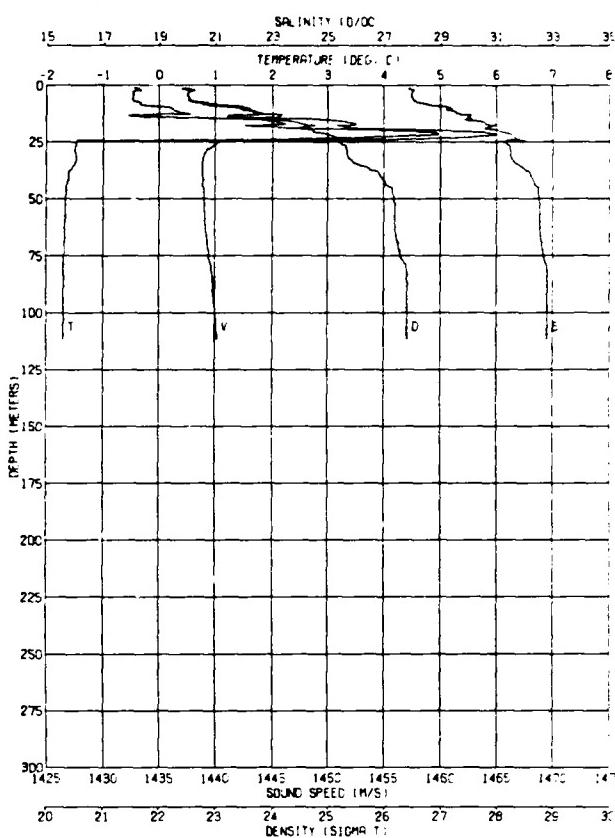
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (10/00)
5.4	1.91	1450.3	23.80	29.73
10.1	1.86	1451.0	23.97	29.95
15.0	-1.17	1439.7	24.79	30.81
20.1	-1.09	1439.6	25.14	31.24
25.2	-1.31	1439.3	25.54	31.73
30.2	-1.42	1439.1	25.69	31.91
35.4	-1.52	1438.9	25.90	32.17
40.1	-1.61	1439.1	26.22	32.56
45.0	-1.65	1439.2	26.33	32.70
50.3	-1.66	1439.2	26.34	32.71
55.1	-1.67	1439.3	26.35	32.72
60.2	-1.67	1439.4	26.35	32.72
60.2	-1.67	1439.4	26.35	32.73

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 222 X 256 1922 Ship 71 16.5 158 45.2  
 223 X

222



223



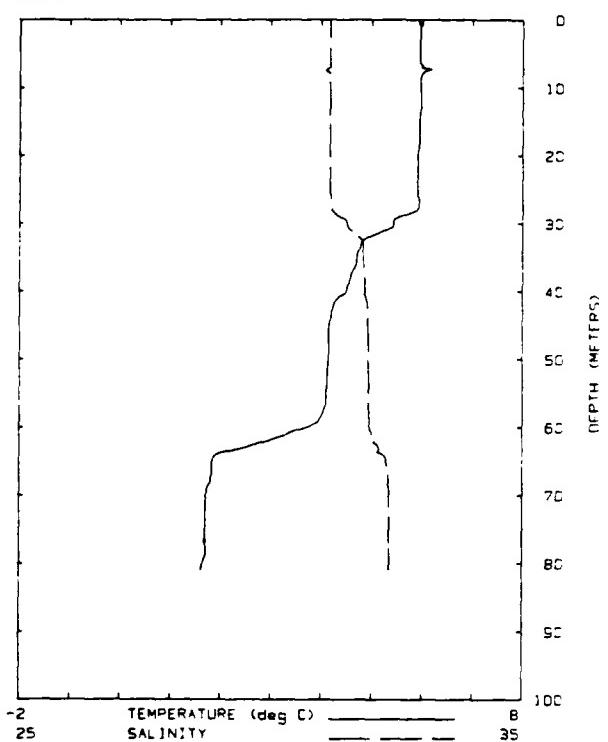
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
3.5	3.4	-0.40	23.370	27.934	22.451	1437.8
8.6	8.6	-0.38	23.677	28.318	22.760	1438.5
13.0	13.0	-0.46	25.444	28.802	23.924	1444.5
18.0	18.0	0.21	25.095	30.829	24.599	1444.5
24.1	23.9	4.86	30.110	31.459	24.832	1465.1
29.0	28.8	-1.24	25.090	31.030	24.869	1438.4
34.8	34.6	-1.46	25.227	31.445	25.309	1438.0
40.7	40.5	-1.60	25.804	32.113	25.053	1438.3
46.6	46.6	-1.65	25.781	32.414	26.088	1438.6
52.2	51.8	-1.86	25.816	32.460	26.135	1436.7
58.2	57.8	-1.67	25.822	32.477	26.140	1438.8
64.1	63.7	-1.68	25.846	32.515	26.181	1438.9
69.0	69.4	-1.89	25.980	32.586	26.222	1439.0
75.0	75.1	-1.70	25.947	32.688	26.304	1439.2
80.9	80.3	-1.70	26.016	32.768	26.386	1439.4
86.8	86.0	-1.70	26.022	32.773	26.390	1439.5
90.9	80.3	-1.70	26.024	32.772	26.380	1439.5

DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

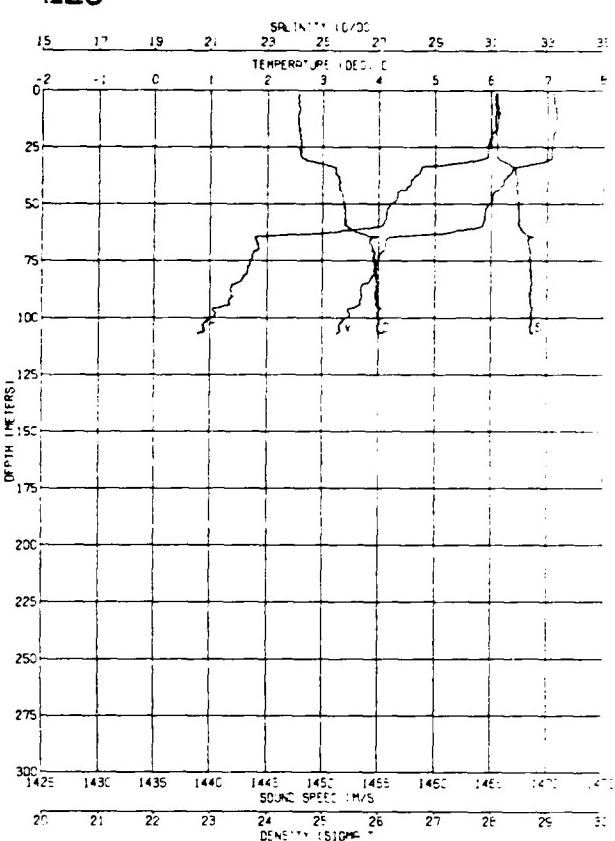
5.9	-0.47	1437.7	22.55	38.04
10.4	-0.22	1442.4	23.63	39.42
15.0	1.80	1449.0	23.94	39.88
20.3	4.54	1461.7	24.72	31.09
25.2	-1.47	1440.3	25.19	31.32
30.5	-1.47	1439.1	25.34	31.49
35.0	-1.50	1438.9	25.56	31.75
40.2	-1.61	1438.9	25.94	32.22
45.0	-1.64	1439.0	26.14	32.47
50.2	-1.66	1439.0	26.18	32.51
55.1	-1.67	1439.0	26.19	32.53
60.3	-1.67	1439.1	26.19	32.53
65.3	-1.66	1439.2	26.21	32.55
70.7	-1.68	1439.3	26.26	32.61
75.3	-1.69	1439.5	26.32	32.69
80.5	-1.70	1439.7	26.40	32.79
85.0	-1.68	1439.8	26.40	32.79
90.3	-1.70	1439.8	26.42	32.81
95.1	-1.70	1439.9	26.41	32.80
100.5	-1.70	1440.0	26.42	32.80
110.3	-1.69	1440.2	26.41	32.80
111.8	-1.68	1440.2	26.41	32.79

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
224	X		256	2017	Ship	71 13.7	158 43.8
225		X					

224



225



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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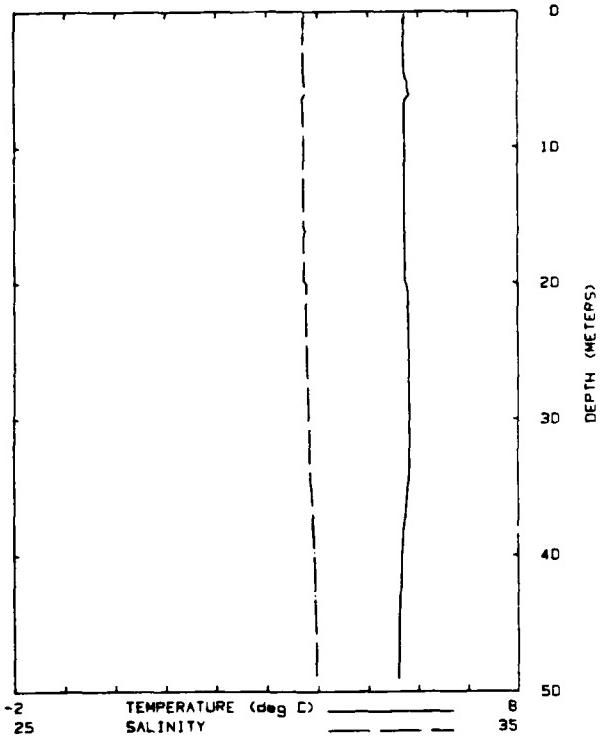
2.6	2.6	5.95	30.911	31.169	24.560	1469.7
8.2	8.1	5.99	30.962	31.190	24.572	1465.9
13.1	13.1	5.97	30.931	31.170	24.558	1465.9
18.0	17.9	5.93	30.907	31.174	24.566	1465.9
23.2	23.0	5.90	30.869	31.177	24.571	1465.8
28.7	28.6	5.74	30.850	31.204	24.675	1465.4
34.4	34.2	4.74	30.508	31.034	25.220	1466.1
39.4	39.1	4.54	30.374	31.872	25.271	1465.4
44.3	44.0	4.18	30.142	31.934	25.355	1464.1
49.4	49.1	4.15	30.119	31.841	25.364	1464.0
54.3	54.0	4.11	30.091	31.845	25.372	1464.0
59.4	59.0	3.85	29.970	31.054	25.394	1463.4
64.2	63.8	2.01	28.560	32.178	25.736	1455.4
68.9	68.4	1.77	28.482	32.321	25.866	1454.6
73.7	73.2	1.70	28.450	32.356	25.900	1454.4
77.4	76.9	1.70	28.446	32.350	25.905	1454.4
78.8	76.4	1.71	28.459	32.353	25.906	1454.5
81.0	80.5	1.64	28.405	32.358	25.906	1454.2
81.2	80.7	1.64	28.404	32.353	25.902	1454.3

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (‰)
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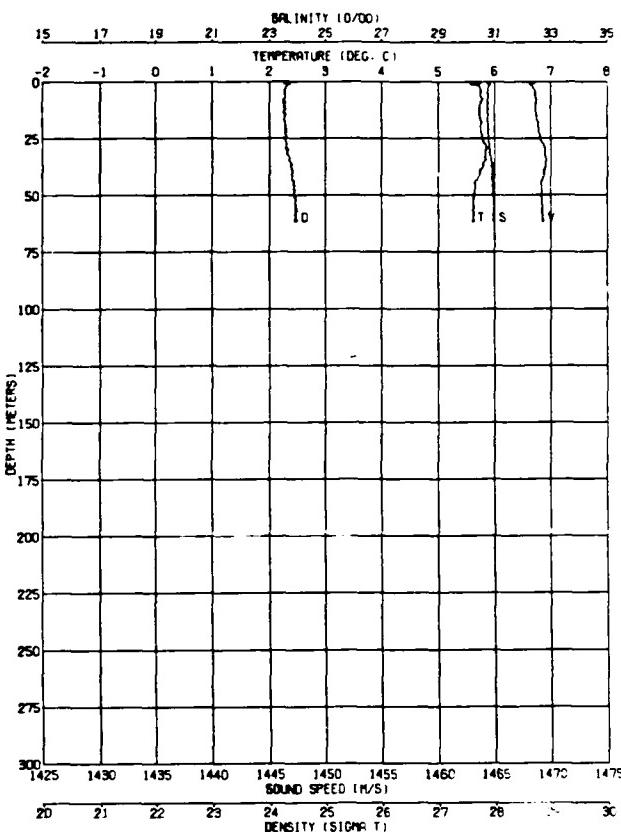
5.2	6.11	1470.7	24.58	31.18
10.3	6.14	1470.9	24.58	31.19
15.0	6.11	1470.8	24.55	31.16
20.3	6.00	1470.5	24.59	31.19
25.1	5.95	1470.4	24.61	31.20
30.2	5.85	1470.3	24.70	31.31
35.1	4.75	1466.9	25.24	31.86
40.2	4.57	1466.1	25.30	31.90
45.0	4.34	1465.2	25.34	31.93
50.2	4.20	1464.7	25.39	31.97
55.1	4.13	1464.4	25.40	31.97
60.1	3.93	1464.0	25.47	32.04
65.2	1.80	1455.8	25.86	32.33
70.4	1.86	1455.6	25.88	32.35
75.0	1.72	1455.0	25.96	32.43
80.3	1.66	1454.7	25.97	32.44
85.0	1.45	1454.0	26.01	32.47
90.2	1.37	1453.5	25.97	32.41
95.3	1.24	1453.1	26.00	32.44
100.1	1.03	1452.2	26.00	32.43
107.1	.78	1451.3	26.10	32.53

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
226	X		256	2131	Ship	71 8.8	158 38.2
227		X					

226



227



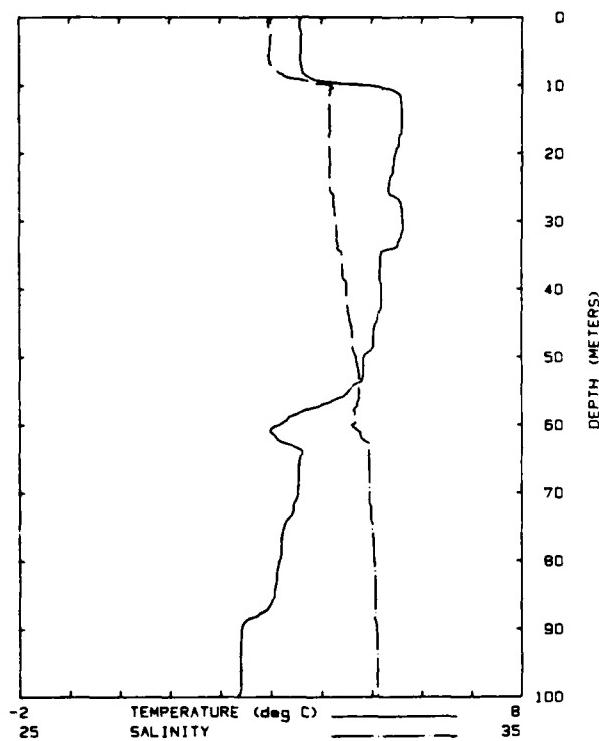
PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.0	4.0	5.73	30.348	30.738	24.246	1465.3
9.8	9.8	5.74	30.352	30.735	24.243	1465.4
15.9	15.8	5.72	30.338	30.728	24.239	1465.4
22.0	21.9	5.81	30.465	30.787	24.275	1469.0
28.0	27.8	5.82	30.486	30.812	24.293	1469.1
33.7	33.5	5.83	30.547	30.861	24.332	1469.3
39.8	39.5	5.68	30.494	30.837	24.409	1468.9
45.5	45.2	5.81	30.470	30.888	24.440	1468.7
49.2	49.0	5.60	30.468	30.972	24.445	1468.8

DEPTH (M) T (C) V (M/S) DENSITY S (PPT)

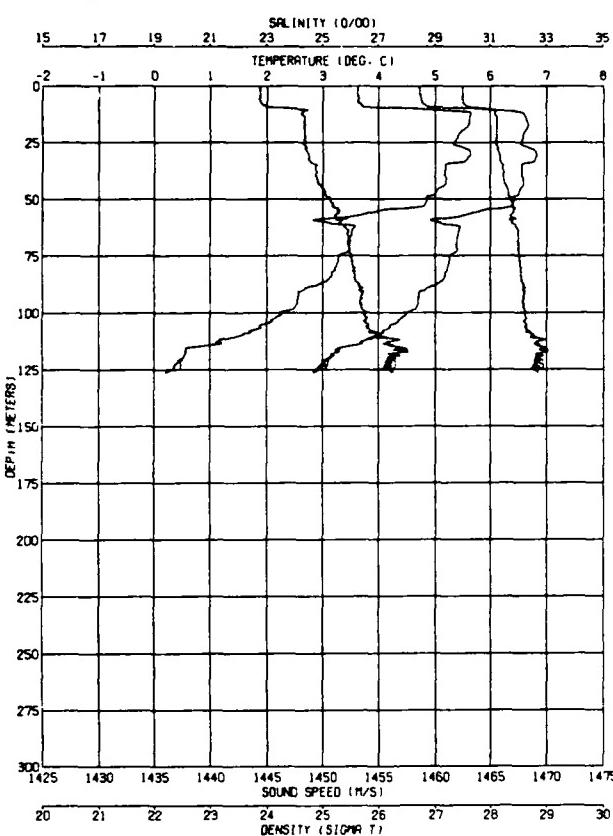
5.2	5.75	1468.6	24.28	30.76
10.4	5.74	1468.7	24.28	30.75
15.0	5.74	1468.7	24.28	30.76
20.1	5.75	1468.9	24.29	30.77
25.2	5.78	1469.1	24.29	30.77
30.2	5.84	1469.5	24.31	30.81
35.1	5.81	1469.6	24.37	30.89
40.2	5.73	1469.4	24.42	30.93
45.3	5.65	1469.2	24.44	30.95
50.4	5.62	1469.1	24.46	30.97
55.6	5.61	1469.2	24.47	30.98
60.2	5.61	1469.3	24.47	30.97
61.7	5.61	1469.3	24.47	30.98

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
228	X		257	0135	Ship	71 26.0	156 49.0
229		X					

228



229



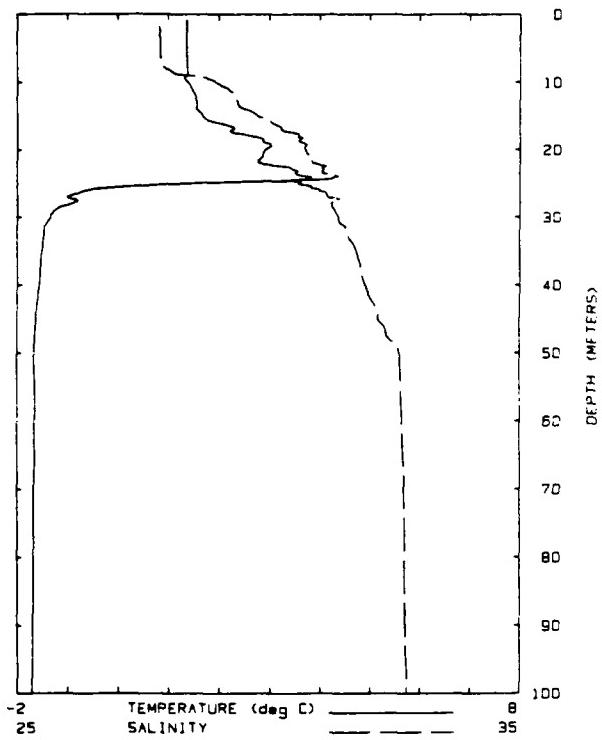
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
2.1	2.1	3.00	28.033	30.034	23.903	1458.5
7.1	7.1	3.59	28.004	30.006	23.882	1458.5
12.2	12.2	5.59	28.508	31.156	24.591	1458.4
17.2	17.1	5.59	30.618	31.164	24.597	1458.5
22.2	22.1	5.43	30.491	31.170	24.620	1457.9
27.7	27.5	5.59	30.678	31.231	24.650	1458.7
32.9	32.7	5.59	30.724	31.306	24.713	1458.8
38.4	38.2	5.16	30.497	31.423	24.851	1457.4
43.9	43.8	5.14	30.582	31.540	24.944	1457.5
49.3	49.0	4.98	30.538	31.627	25.030	1457.1
54.3	54.0	4.69	30.358	31.703	25.122	1456.0
59.2	58.9	3.35	29.228	31.652	25.218	1450.5
64.1	63.7	3.59	29.651	31.926	25.405	1461.9
68.8	68.4	3.54	29.633	31.956	25.435	1461.8
73.5	73.0	3.42	29.552	31.974	25.460	1461.4
78.1	77.7	3.21	29.432	32.039	25.531	1462.6
82.7	82.2	3.11	28.372	32.083	25.559	1460.3
87.2	86.7	2.87	28.274	32.078	25.582	1459.8
91.6	91.0	2.41	28.035	32.104	25.648	1457.5
96.0	95.4	2.39	28.025	32.105	25.650	1457.5
97.4	96.8	2.41	28.042	32.110	25.653	1457.6
100.5	99.8	2.35	28.001	32.118	25.664	1457.4

DEPTH T (C) V (M/S) DENSITY S (PPT)

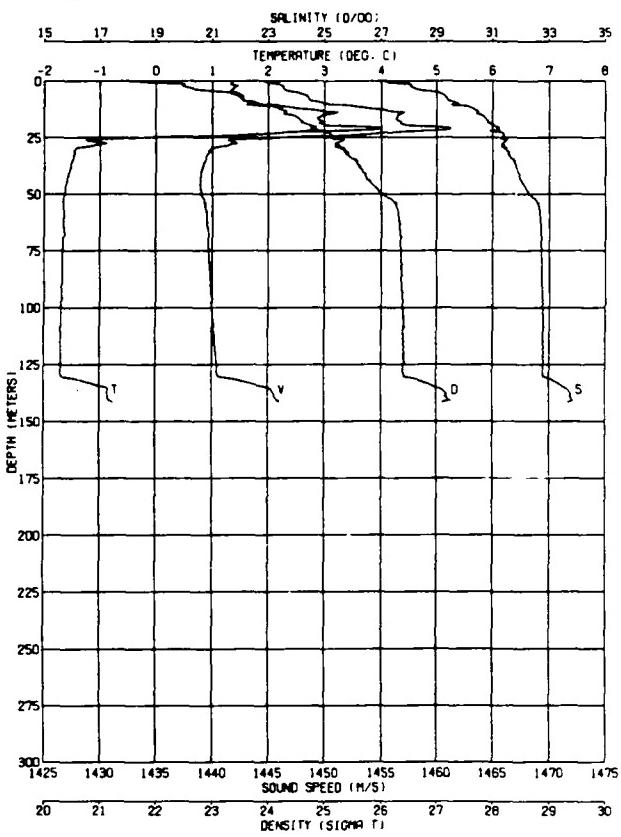
DEPTH	T (C)	V (M/S)	DENSITY	S (PPT)
5.2	3.65	1458.7	23.89	30.00
10.5	4.98	1465.1	24.74	31.21
15.3	5.61	1468.2	24.68	31.23
20.3	5.46	1468.0	24.69	31.22
25.2	5.33	1467.7	24.68	31.20
30.7	5.63	1469.1	24.75	31.34
35.4	5.18	1457.7	24.87	31.43
40.2	5.19	1467.9	24.90	31.47
45.1	5.07	1467.7	25.00	31.58
50.0	4.85	1467.1	25.14	31.73
55.1	4.01	1464.2	25.30	31.85
60.2	3.07	1460.2	25.31	31.75
65.1	3.51	1462.0	25.43	31.94
70.5	3.47	1461.9	25.47	31.98
75.8	3.29	1461.3	25.51	32.01
80.3	3.22	1461.1	25.58	32.10
85.1	3.12	1460.7	25.59	32.09
90.2	2.63	1459.0	25.66	32.15
95.1	2.55	1458.4	25.66	32.13
100.4	2.24	1457.4	25.76	32.23
110.1	1.52	1454.9	26.02	32.49
120.0	.51	1450.7	26.31	32.78
125.0	.30	1449.0	26.00	32.38

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
230	X		257	0238	Ship	71 31.6	156 55.1
231		X					

230



231

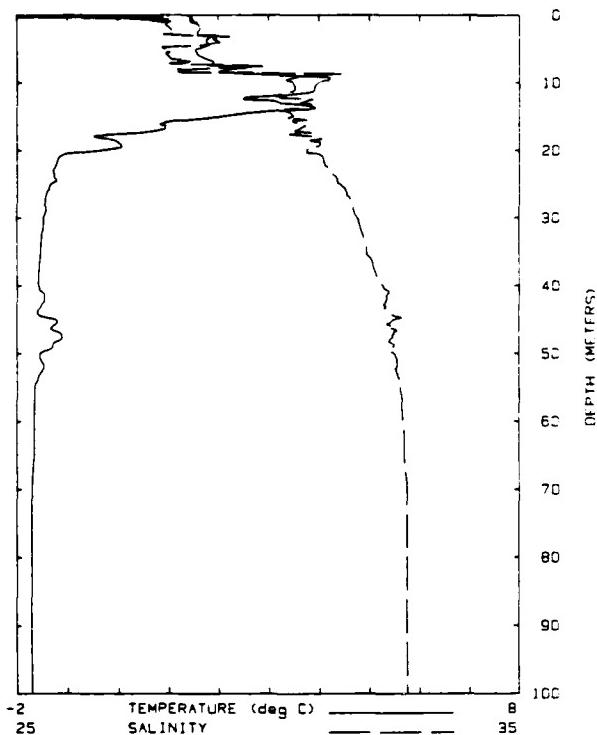


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec.)
1.2	1.2	1.36	24.540	27.830	22.301	1445.6
1.4	1.4	1.36	24.535	27.824	22.297	1445.6
8.4	1.37	24.566	27.851	22.318	22.298	1445.9
11.5	11.4	1.49	25.758	28.227	23.411	1440.4
18.4	18.4	2.14	28.892	30.138	24.089	1452.5
21.5	21.4	2.80	28.030	30.772	24.555	1456.3
28.7	28.6	-0.82	25.487	31.134	25.042	1440.5
31.8	31.8	-1.46	25.282	31.521	25.371	1438.1
36.9	36.7	-1.53	25.432	31.801	25.599	1438.2
42.0	41.8	-1.50	25.541	32.006	25.786	1438.3
47.3	47.0	-1.84	25.734	32.334	26.033	1438.5
52.5	52.2	-1.85	25.940	32.824	26.288	1439.0
57.8	57.4	-1.84	25.980	32.635	26.277	1439.1
63.1	62.7	-1.65	25.872	32.861	26.288	1439.2
68.3	67.0	-1.86	25.985	32.689	26.322	1439.2
73.4	73.0	-1.66	25.984	32.687	26.328	1439.3
78.7	78.2	-1.68	25.985	32.700	26.330	1439.4
83.9	83.4	-1.68	25.986	32.701	26.331	1439.4
88.1	88.0	-1.69	25.989	32.706	26.336	1439.5
94.3	93.7	-1.70	25.985	32.721	26.348	1439.6
99.4	98.8	-1.71	26.002	32.742	26.365	1439.6
104.6	104.0	-1.71	26.011	32.750	26.372	1439.7
109.8	109.1	-1.71	26.015	32.753	26.374	1439.8
115.0	114.2	-1.71	26.017	32.752	26.373	1439.9
120.2	119.4	-1.71	26.020	32.753	26.374	1440.0
125.3	124.5	-1.73	26.023	32.754	26.375	1440.0
130.5	129.8	-1.70	26.031	32.758	26.379	1440.1
130.8	130.0	-1.70	26.034	32.759	26.378	1440.2

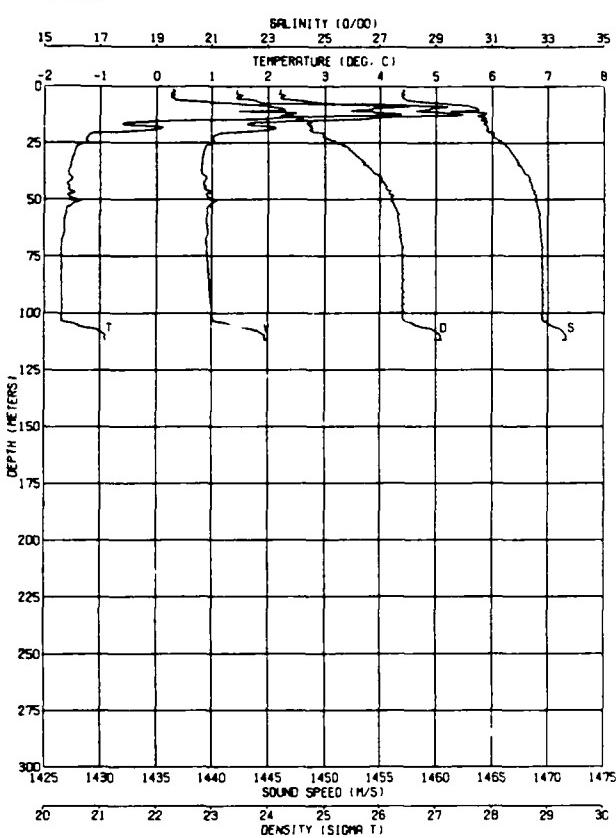
DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.5	1.46	1447.8	23.34	29.12
10.3	1.83	1450.3	23.85	29.79
15.1	2.99	1456.5	24.45	30.63
20.4	3.79	1460.2	24.87	31.23
25.6	-.69	1444.3	25.15	31.30
30.1	-1.44	1439.8	25.29	31.43
35.1	-1.49	1439.3	25.54	31.73
40.1	-1.55	1439.0	25.67	31.89
45.1	-1.59	1438.9	25.82	32.07
50.2	-1.63	1439.0	26.02	32.32
55.3	-1.64	1439.4	26.27	32.62
60.1	-1.64	1439.5	26.32	32.68
65.2	-1.65	1439.6	26.33	32.70
70.0	-1.65	1439.6	26.36	32.73
75.1	-1.67	1439.6	26.36	32.74
80.3	-1.67	1439.7	26.36	32.74
85.5	-1.67	1439.8	26.36	32.74
90.2	-1.69	1439.6	26.37	32.75
95.3	-1.68	1439.9	26.37	32.75
100.4	-1.70	1440.0	26.40	32.78
110.5	-1.70	1440.1	26.40	32.79
120.0	-1.70	1440.3	26.42	32.81
130.0	-1.68	1440.5	26.41	32.80
140.8	-.84	1445.8	27.22	33.83
141.2	-.78	1445.9	27.05	33.62

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
232	X		257	0339	Ship	71 34.3	156 57.7
233		X					

232



233



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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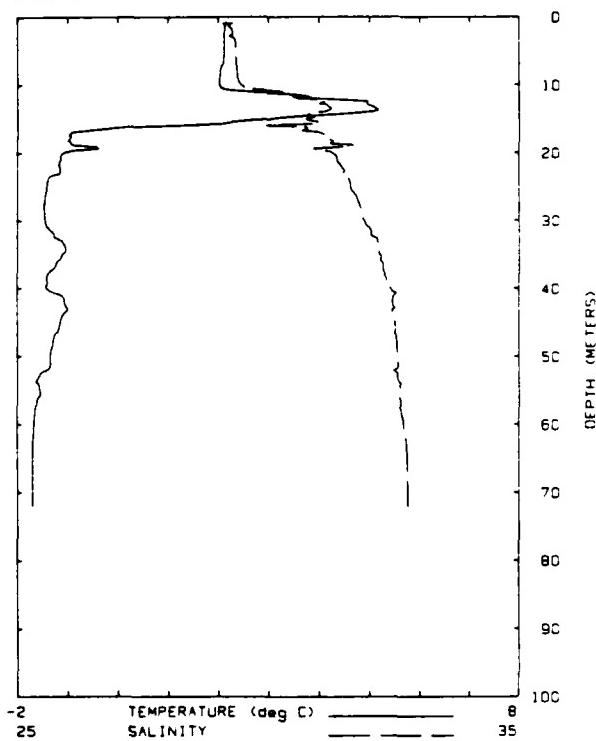
3.6	3.6	1.77	25.680	28.088	23.124	1449.0
9.1	9.1	3.80	28.747	30.886	24.403	1450.3
14.2	14.1	3.27	28.018	30.316	24.155	1457.6
19.5	19.4	0.07	26.073	30.989	24.902	1444.4
24.8	24.7	-1.23	25.336	31.358	25.234	1438.6
30.3	30.1	-1.47	25.453	31.774	25.576	1438.3
35.7	35.5	-1.54	25.539	31.955	25.724	1439.3
41.3	41.1	-1.48	25.801	32.382	26.076	1439.3
46.4	46.1	-1.29	26.020	32.346	26.035	1440.2
51.4	51.1	-1.51	26.988	32.553	26.204	1439.5
56.5	56.2	-1.85	25.857	32.644	26.285	1439.1
61.6	61.2	-1.66	25.894	32.887	26.328	1439.2
66.7	66.3	-1.86	25.987	32.705	26.334	1439.2
71.8	71.4	-1.71	26.089	32.753	26.374	1439.2
76.6	76.4	-1.71	26.001	32.753	26.374	1439.3
81.8	81.3	-1.71	26.004	32.754	26.375	1439.3
86.9	86.3	-1.71	26.006	32.754	26.375	1439.4
92.0	91.4	-1.71	26.009	32.755	26.375	1439.5
96.9	96.3	-1.71	26.012	32.755	26.375	1439.6
101.0	101.2	-1.70	26.026	32.766	26.384	1439.7
102.8	102.2	-1.69	26.034	32.768	26.386	1439.8

DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/oo)
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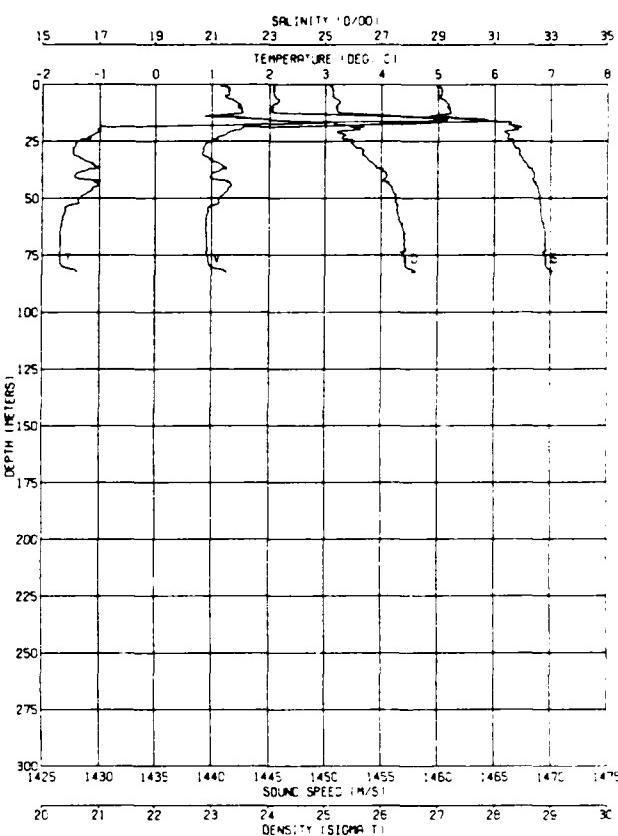
5.1	1.46	1446.1	22.28	27.80
10.1	3.81	1459.5	24.26	30.48
15.0	.43	1448.8	24.75	30.86
20.1	.80	1442.2	24.94	31.02
25.4	-1.35	1439.4	25.35	31.50
30.6	-1.49	1438.9	25.64	31.85
35.0	-1.54	1438.9	25.81	32.07
40.1	-1.50	1439.4	26.06	32.37
45.1	-1.58	1439.2	26.13	32.46
50.0	-1.35	1440.3	26.21	32.56
55.1	-1.62	1439.5	26.31	32.67
60.5	-1.64	1439.5	26.35	32.72
65.3	-1.65	1439.6	26.37	32.75
70.3	-1.70	1439.5	26.40	32.78
75.1	-1.70	1439.6	26.41	32.79
80.3	-1.70	1439.6	26.41	32.79
85.1	-1.70	1439.7	26.41	32.79
90.2	-1.70	1439.8	26.41	32.80
95.3	-1.70	1439.9	26.40	32.79
100.2	-1.69	1440.0	26.41	32.79
110.2	-.92	1444.8	27.08	33.65
112.0	-.90	1444.7	26.96	33.50

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 234 X 257 0426 Ship 71 37.1 157 1.7  
 235 X

234



235



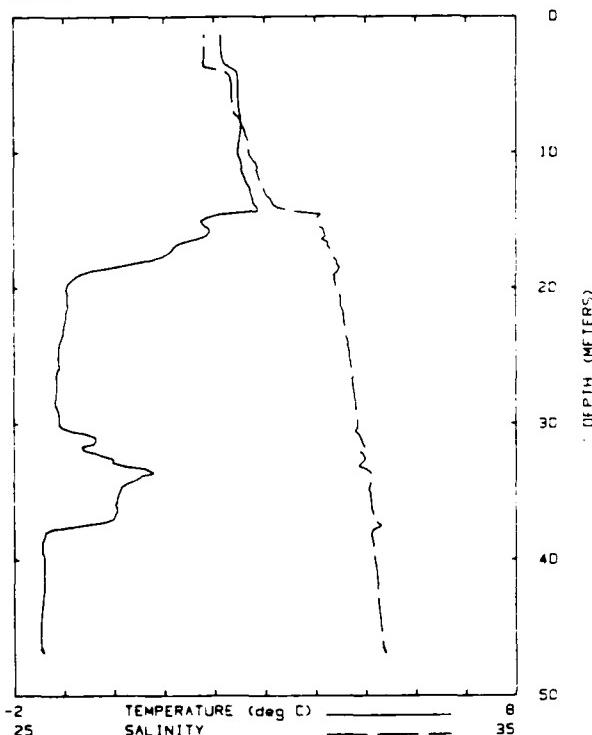
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
1.0	1.0	2.13	26.272	29.269	23.406	1451.1
6.0	6.0	2.10	26.326	29.381	23.481	1451.2
11.5	11.5	3.44	26.357	30.559	24.334	1458.6
16.8	16.5	-0.20	25.894	30.780	24.738	1442.8
22.4	22.3	-1.15	25.472	31.483	25.317	1439.3
28.1	28.0	-1.47	25.488	31.816	25.810	1438.4
33.9	33.7	-1.06	26.098	32.202	25.811	1440.9
39.8	38.6	-1.40	25.834	32.351	26.042	1439.6
44.9	44.7	-1.13	26.266	32.509	26.182	1441.2
50.4	50.1	-1.35	26.143	32.567	26.215	1440.3
56.0	55.7	-1.54	26.025	32.612	26.256	1439.6
61.1	60.8	-1.67	25.878	32.693	26.325	1439.1
66.3	65.8	-1.70	26.006	32.757	26.377	1439.1
71.2	70.8	-1.70	26.009	32.761	26.380	1439.2
72.4	72.0	-1.70	26.010	32.761	26.380	1439.2

DEPTH T (C) V (M/S) DENSITY S (‰)

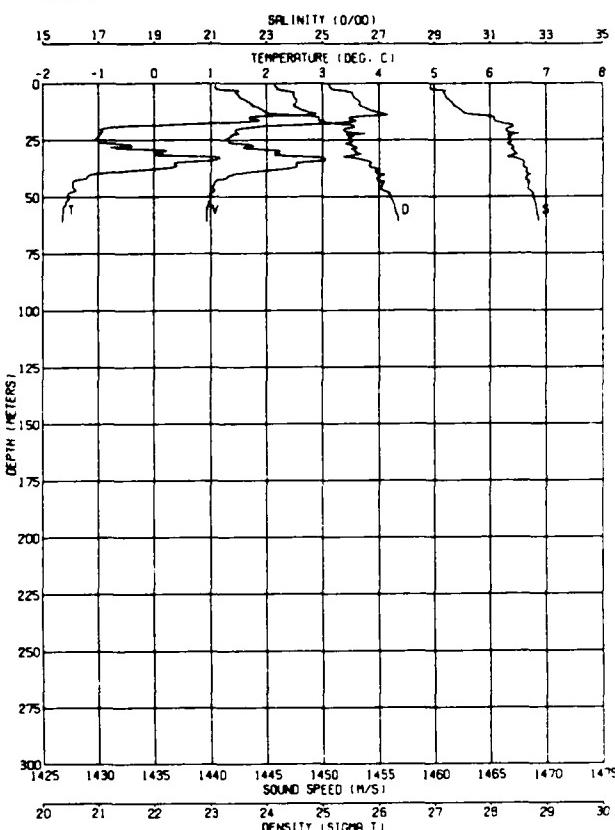
DEPTH	T (C)	V (M/S)	DENSITY	S (‰)
5.5	2.10	1450.7	23.25	29.06
10.3	2.04	1451.1	23.51	29.39
15.4	5.17	1464.1	23.97	30.25
20.1	-1.08	1442.1	25.43	31.61
25.4	-1.38	1440.0	25.40	31.56
30.1	-1.44	1439.5	25.57	31.78
35.1	-1.13	1441.0	25.81	32.07
40.1	-1.43	1440.1	26.05	32.37
45.4	-1.11	1441.6	26.15	32.49
50.2	-1.35	1440.7	26.23	32.59
55.3	-1.59	1439.7	26.27	32.63
60.3	-1.66	1439.5	26.31	32.68
65.1	-1.69	1439.6	26.41	32.80
70.2	-1.69	1439.6	26.39	32.77
75.1	-1.70	1439.6	26.40	32.78
80.6	-1.61	1440.2	26.50	32.92
82.6	-1.38	1441.2	26.51	32.93

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
236	X		257	0504	Ship	71 39.9	157 4.6
237		X					

236



237

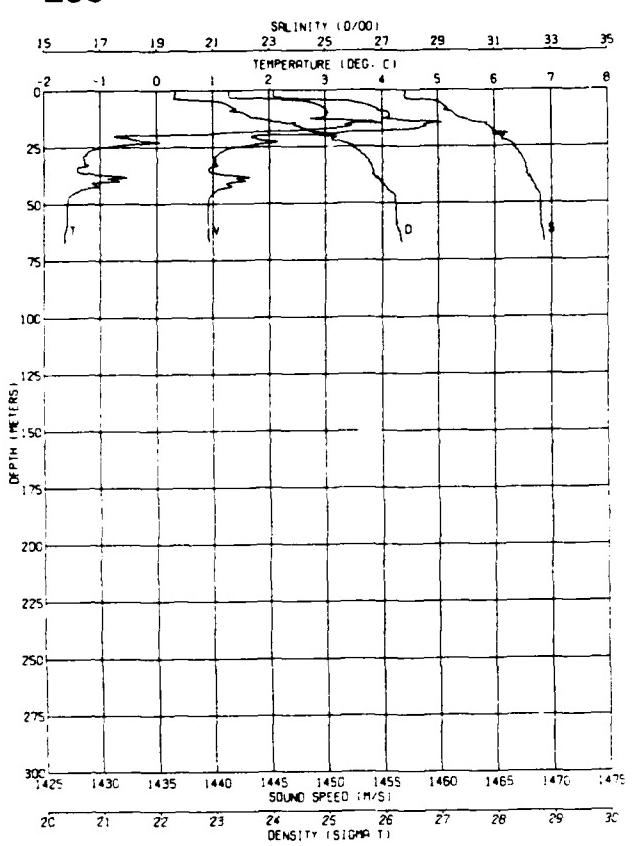


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec.)
0.6	0.6	2.14	25.830	28.851	23.072	1450.6
2.6	2.6	2.15	25.839	28.851	23.072	1450.6
7.7	7.7	2.51	26.765	29.549	23.604	1453.2
12.7	12.8	2.71	27.384	30.057	23.983	1454.9
17.4	17.3	1.09	27.034	31.213	25.023	1449.3
22.2	22.1	-0.86	25.881	31.554	25.385	1440.3
26.9	26.7	-1.15	25.868	31.719	25.524	1439.6
31.7	31.5	-1.18	25.781	31.881	25.864	1439.8
36.2	36.0	-0.84	26.330	32.068	25.780	1442.6
40.8	40.8	-1.40	25.824	32.189	25.918	1439.4
45.4	45.2	-1.45	25.852	32.290	25.984	1439.3
47.0	46.7	-1.44	25.930	32.377	26.064	1439.6

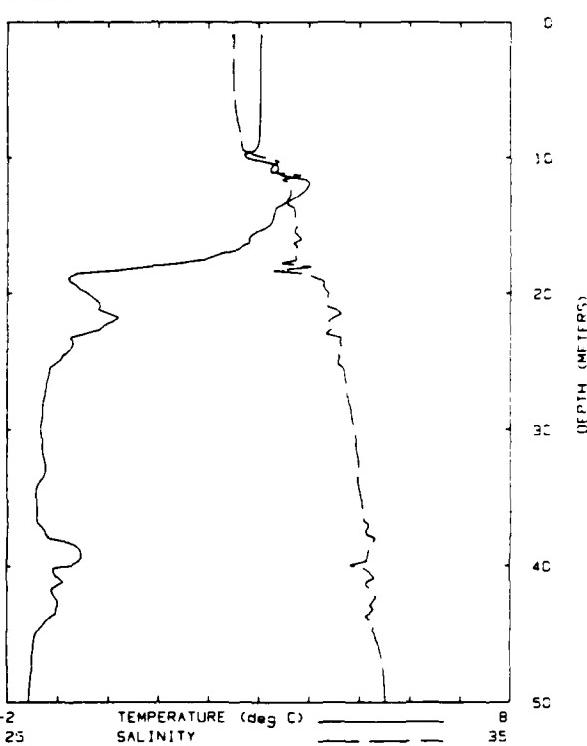
DEPTH (M)	T (C)	V (M/S)	DENSITY	S (0/00)
5.4	2.49	1452.8	23.49	32.40
10.1	2.51	1453.5	23.76	32.74
15.1	1.68	1452.5	24.92	31.14
20.1	-0.93	1442.2	25.44	31.63
25.1	-0.99	1441.4	25.61	31.83
30.3	-0.04	1445.5	25.72	32.01
35.3	.37	1447.7	25.85	32.20
40.3	-1.16	1441.9	26.15	32.49
45.0	-1.46	1440.1	26.09	32.42
50.0	-1.54	1439.8	26.24	32.60
55.2	-1.62	1439.6	26.32	32.68
60.2	-1.65	1439.5	26.36	32.74
60.8	-1.65	1439.5	26.36	32.74

Station ASL APL Julian GMT  
 Number Cast Cast Day hmmm Platform Latitude Longitude  
 238 X X 257 0549 Ship 71 41.6 157 9.2  
 239 X

238



239



DEPTH (M) T (C) V (M/S) DENSITY S (0/00)

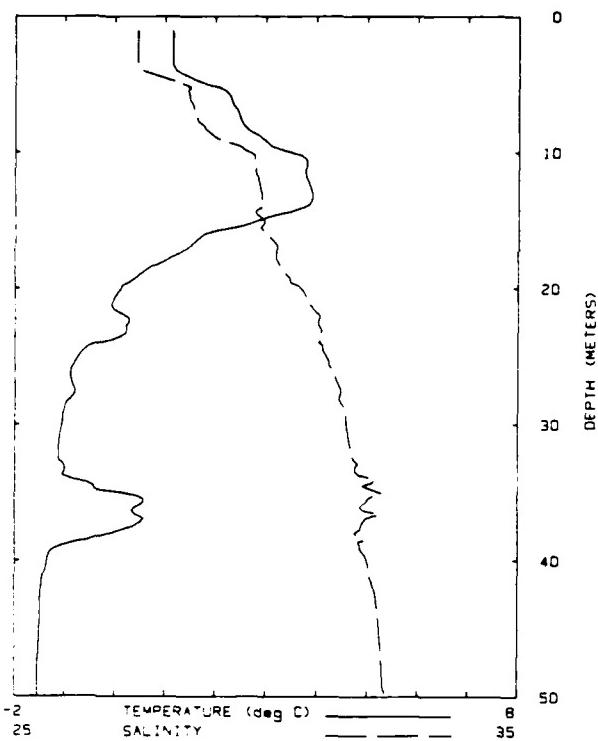
5.6	2.81	1452.9	23.25	29.10
10.4	3.04	1455.6	23.57	29.55
15.4	3.34	1458.8	24.44	30.67
20.3	-0.75	1443.5	25.12	31.25
25.1	-1.03	1441.9	25.49	31.68
30.3	-1.28	1440.2	25.73	31.97
35.3	-1.41	1439.6	25.83	32.08
40.2	-0.94	1442.3	25.98	32.29
45.3	-1.49	1440.0	26.17	32.51
50.2	-1.58	1439.6	26.23	32.58
55.2	-1.59	1439.6	26.25	32.60
60.2	-1.60	1439.6	26.27	32.62
65.1	-1.63	1439.6	26.34	32.71
67.2	-1.63	1439.7	26.35	32.72

PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
 (dbar) (M) (deg C) (ms/cm) (‰) (kg/m³) (m/sec)

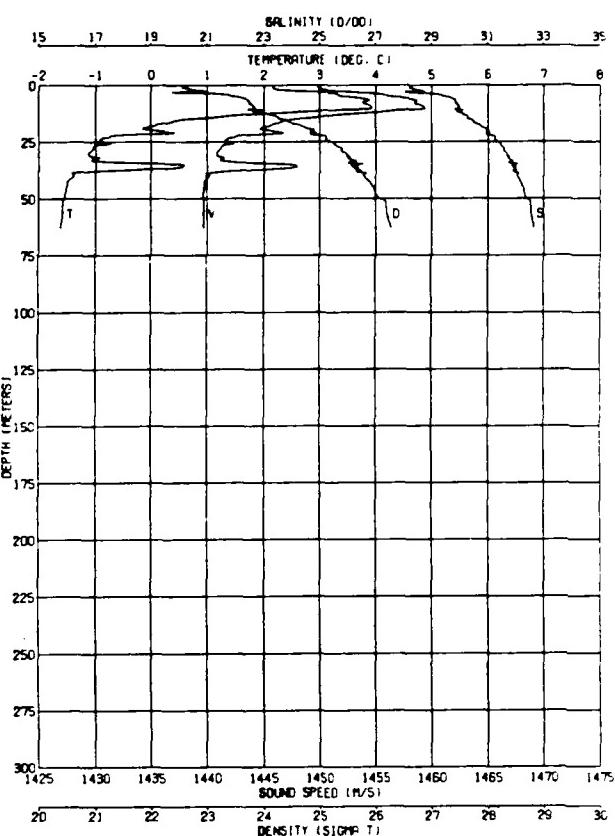
5.6	5.6	3.03	27.174	30.531	23.551	1455.5
11.2	11.1	3.35	28.031	30.256	24.101	1457.9
16.9	16.8	2.59	27.819	30.719	24.530	1455.3
22.5	22.4	-0.08	26.317	31.480	25.285	1444.3
28.5	28.4	-1.30	25.825	31.821	25.810	1439.2
34.3	34.1	-1.40	25.668	31.985	25.745	1439.0
40.2	40.0	-0.70	26.106	31.832	25.862	1442.2
45.7	45.5	-1.47	25.883	32.347	26.040	1439.4
51.5	51.2	-1.59	25.917	32.522	26.184	1439.1
51.9	51.8	-1.59	25.917	32.523	26.185	1439.1

Station ASL APL Julian GMT  
 Number Cast Cast Day hhmm Platform Latitude Longitude  
 240 X 257 0620 Ship 71 45.4 157 10.9  
 241 X

240



241

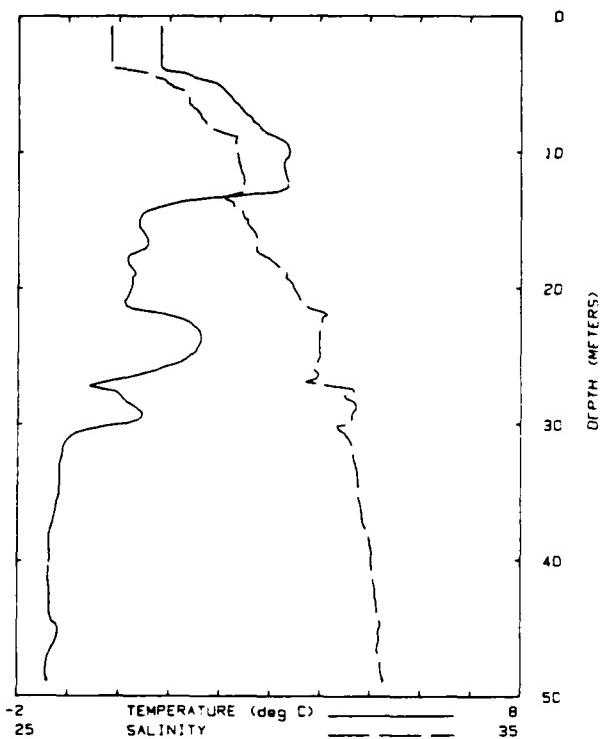


PRESSURE (kbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.8	4.7	1.61	24.061	28.133	22.531	1447.3
9.0	8.9	3.33	27.437	29.569	23.557	1456.9
15.1	15.1	2.84	27.390	28.869	23.914	1455.3
20.5	20.4	0.06	25.880	30.761	24.711	1444.0
25.3	25.2	-0.75	25.599	31.215	25.106	1445.9
30.7	30.5	-1.08	25.638	31.611	25.435	1446.0
36.0	35.6	0.57	27.232	31.866	25.873	1448.2
41.2	41.0	-1.42	25.693	32.042	25.792	1439.1
46.6	46.3	-1.52	25.784	32.271	25.979	1439.0
50.6	50.3	-1.56	25.894	32.458	26.132	1439.2
50.7	50.4	-1.57	25.800	32.476	26.146	1439.1
50.8	50.5	-1.56	25.898	32.468	26.140	1439.2

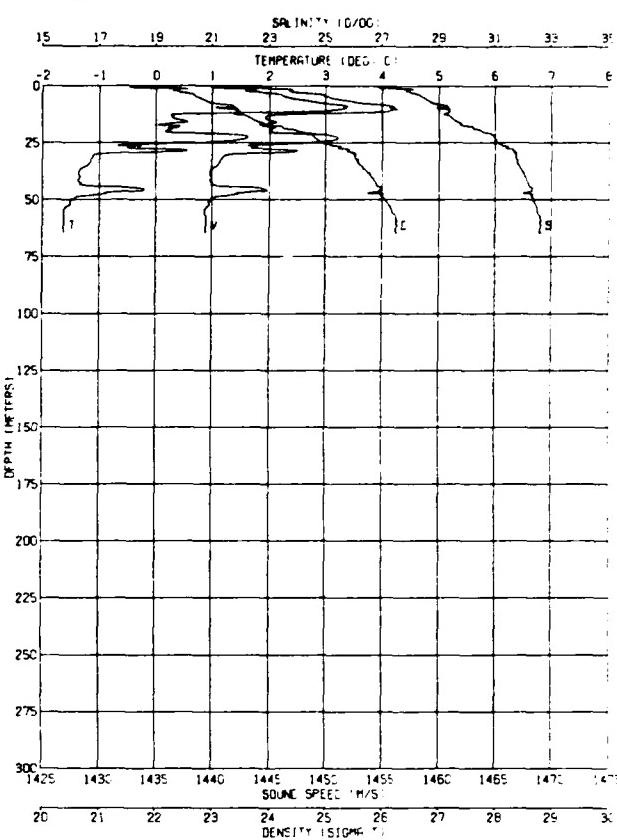
DEPTH	T (C)	V (M/S)	DENSITY	S (P/POO)
5.1	3.61	1457.2	23.58	29.60
10.1	3.94	1459.4	23.85	29.98
15.3	.56	1447.5	24.38	30.40
20.1	.19	1445.8	24.88	30.95
25.2	-.83	1442.0	25.25	31.40
30.6	-1.12	1440.9	25.49	31.69
35.0	.64	1447.7	25.57	31.86
40.1	-1.38	1440.2	25.81	32.07
45.6	-1.51	1439.8	25.99	32.29
50.2	-1.53	1439.8	26.10	32.42
55.7	-1.58	1439.7	26.19	32.53
60.3	-1.59	1439.7	26.24	32.59
62.9	-1.61	1439.7	26.31	32.68

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
242	X		257	0659	Ship	71 48.2	157 14.8
243		X					

242



243



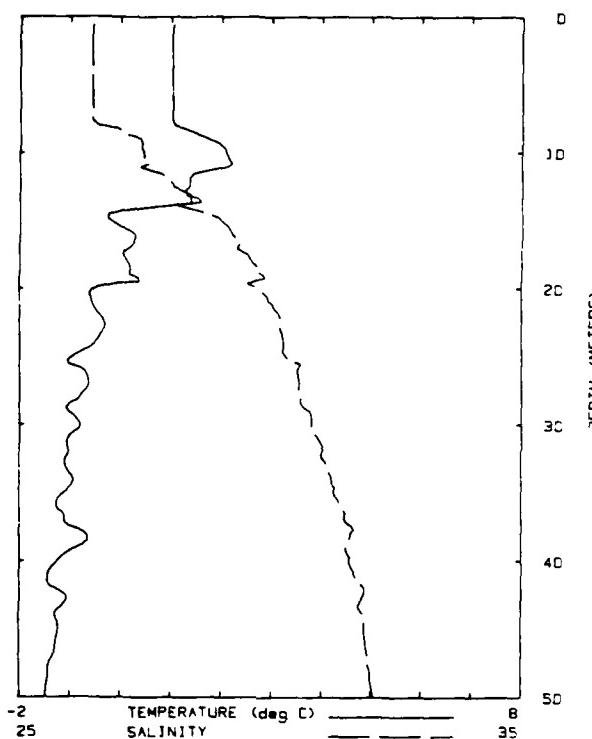
PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
4.5	4.5	1.48	24.534	27.717	22.205	1446.2
9.0	9.0	1.38	27.275	29.332	23.365	1456.8
14.0	14.0	0.41	25.150	28.480	23.867	1443.9
20.1	20.1	0.25	25.015	30.484	24.480	1444.5
25.3	25.2	1.38	27.073	30.894	24.832	1450.3
30.3	30.2	-0.26	26.078	31.344	25.193	1443.5
35.5	35.3	-1.19	25.670	31.773	25.566	1439.8
40.4	40.2	-1.37	25.729	32.032	25.782	1436.3
45.5	45.2	-1.20	25.870	32.172	25.892	1430.4
48.1	48.0	-1.40	25.875	32.256	25.965	1439.6
49.0	48.7	-1.43	25.859	32.286	25.973	1439.5

DEPTH	T (C)	V (M/S)	DENSITY	S (10/000)
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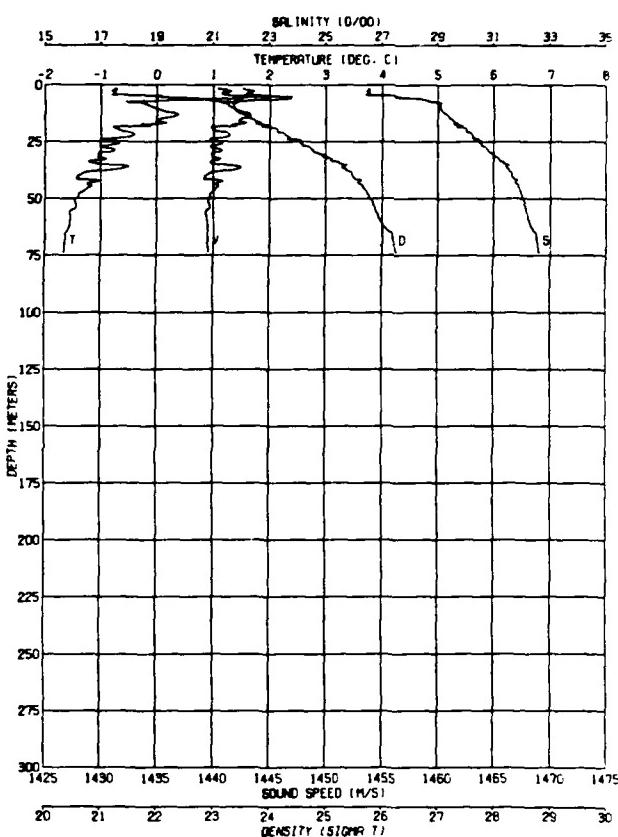
DEPTH	T (C)	V (M/S)	DENSITY	S (10/000)
5.2	2.34	1450.4	22.80	28.51
10.1	3.33	1456.4	23.47	29.44
15.3	.40	1445.0	23.75	29.59
20.1	.19	1445.3	24.48	30.49
25.4	.58	1447.9	24.82	30.94
30.2	-1.15	1441.7	25.52	31.71
35.3	-1.20	1440.7	25.58	31.79
40.3	-1.34	1440.2	25.76	32.01
45.1	-.25	1444.5	26.00	32.34
50.3	-1.48	1440.0	26.02	32.32
55.1	-1.64	1439.4	26.14	32.47
60.1	-1.64	1439.5	26.23	32.57
64.0	-1.64	1439.5	26.26	32.61

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
244	X		257	0756	Ship	71 55.0	157 21.5
245		X					

244



245

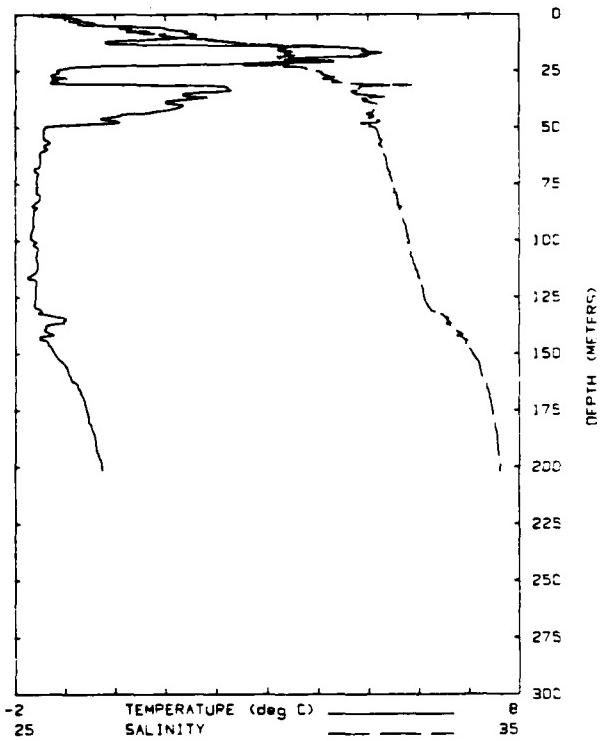


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	_SOUND VELOCITY (M/SEC)
8.0	8.0	1.04	23.211	26.449	21.211	1442.6
12.6	12.5	1.37	24.742	26.070	22.483	1446.3
18.2	18.1	0.17	25.092	28.828	23.796	1443.0
23.7	23.6	-0.40	25.193	30.243	24.311	1441.2
28.5	28.4	-0.81	25.180	30.816	24.786	1435.7
35.1	34.9	-1.04	25.424	31.276	25.163	1439.8
40.5	40.2	-1.28	25.461	31.576	25.412	1439.1
45.8	45.6	-1.25	25.723	31.889	25.864	1439.8
51.2	50.9	-1.45	25.707	32.086	25.828	1439.2
55.2	54.9	-1.51	25.716	32.183	25.890	1439.1
55.2	54.9	-1.51	25.715	32.159	25.889	1439.0

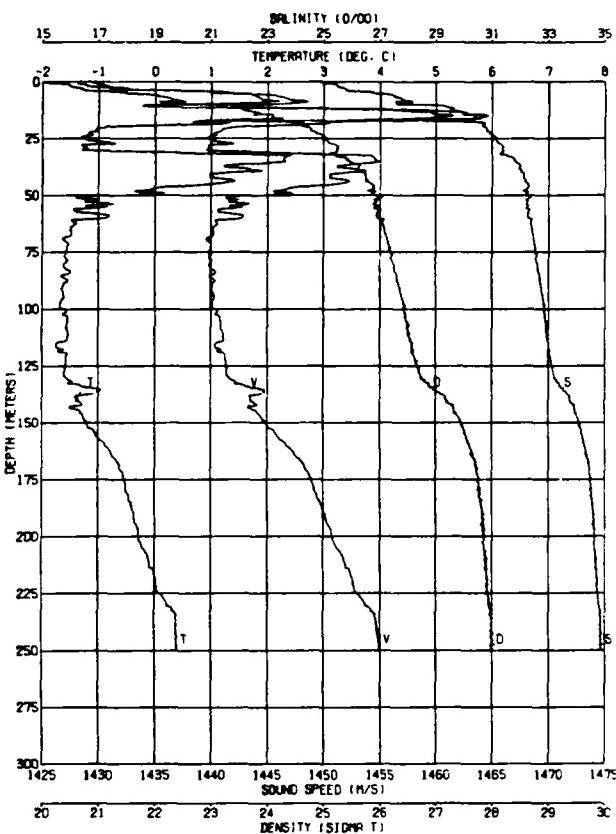
DEPTH	T (C)	V (M/S)	DENSITY	S (‰)
5.2	2.01	1447.1	21.99	27.46
10.4	.01	1441.9	23.37	29.09
15.7	.01	1442.3	23.75	29.56
20.6	-.61	1440.3	24.14	30.02
25.4	-.66	1440.7	24.58	30.56
30.3	-1.04	1439.8	24.90	30.94
35.3	-.67	1441.6	25.39	31.57
40.2	-1.41	1439.2	25.48	31.66
45.1	-1.23	1440.3	25.67	31.89
50.2	-1.45	1439.5	25.79	32.04
55.2	-1.53	1439.4	25.89	32.16
60.4	-1.55	1439.4	25.99	32.28
65.4	-1.65	1439.4	26.17	32.51
70.0	-1.65	1439.5	26.21	32.55
73.6	-1.65	1439.6	26.27	32.62

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
246	X		257	1536	Ship	72 5.0	155 32.4
247		X					

246



247



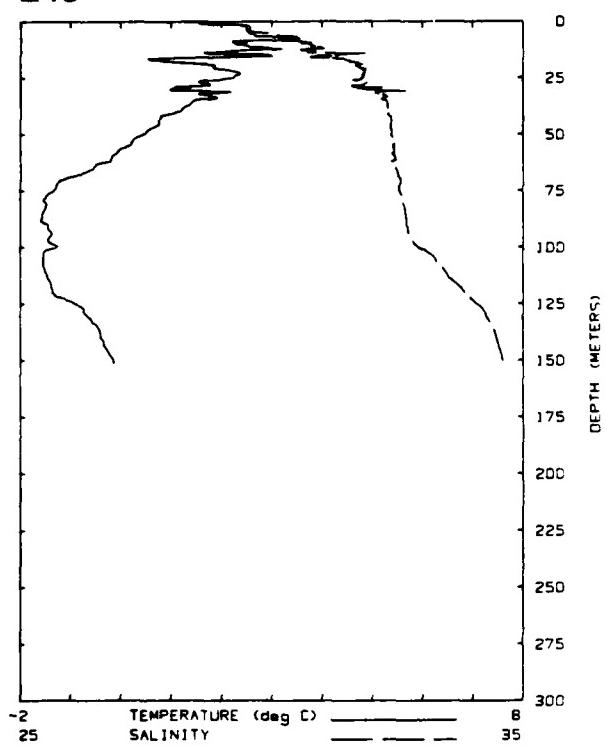
PRESSURE (dbar)	DEPTH (m)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
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0.0	0.6	-1.10	21.201	35.703	20.665	1431.4
6.4	6.4	0.89	23.680	27.090	21.727	1443.2
12.2	12.1	-0.03	24.577	28.158	23.426	1441.3
17.9	17.8	5.05	26.478	30.374	24.033	1445.3
23.5	23.4	-0.81	25.093	30.594	24.600	1439.8
29.2	28.1	-1.25	25.276	31.283	25.182	1438.7
34.8	34.6	1.77	27.981	31.727	25.393	1453.3
40.6	40.3	1.35	28.003	32.170	25.775	1452.1
46.2	45.9	-0.10	26.716	32.007	25.720	1445.3
52.0	51.7	-1.43	25.798	32.187	25.810	1439.4
57.6	57.6	-1.34	25.880	32.206	25.823	1440.0
63.3	63.5	-1.50	25.871	32.352	26.044	1439.5
70.0	70.5	-1.55	25.885	32.432	26.111	1439.5
77.0	77.5	-1.50	25.842	32.528	26.189	1439.6
84.0	84.3	-1.62	25.853	32.564	26.235	1439.6
91.0	91.2	-1.84	26.020	32.698	26.326	1439.7
97.9	97.3	-1.89	26.035	32.771	26.388	1439.7
104.8	104.1	-1.54	26.205	32.837	26.438	1440.6
111.7	110.8	-1.54	26.276	32.827	26.511	1440.9
118.6	117.6	-1.58	26.332	33.045	26.808	1440.9
125.2	124.3	-1.59	26.371	33.107	26.658	1441.1
131.4	130.5	-1.51	26.536	33.243	26.767	1441.7
137.7	136.6	-1.05	27.140	33.549	27.000	1444.4
144.1	143.1	-1.90	27.028	33.898	27.297	1442.9
150.8	149.7	-1.22	27.392	34.076	27.432	1444.6
157.1	156.0	-0.87	27.718	34.233	27.550	1445.1
163.0	161.8	-0.87	27.843	34.267	27.581	1446.7
169.8	167.7	-0.67	28.098	34.405	27.678	1447.9
174.9	173.6	-0.58	28.223	34.484	27.722	1449.5
180.6	178.4	-0.52	28.206	34.496	27.745	1449.9
186.5	185.1	-0.42	28.438	34.562	27.784	1449.5
192.3	185.8	-0.38	28.487	34.577	27.804	1449.8
197.6	186.0	-0.31	28.561	34.802	27.821	1450.2
201.3	189.7	-0.26	28.630	34.826	27.838	1450.6
203.3	201.7	-0.35	28.633	34.821	27.834	1450.7
203.2	201.7	-0.25	28.635	34.823	27.835	1450.7

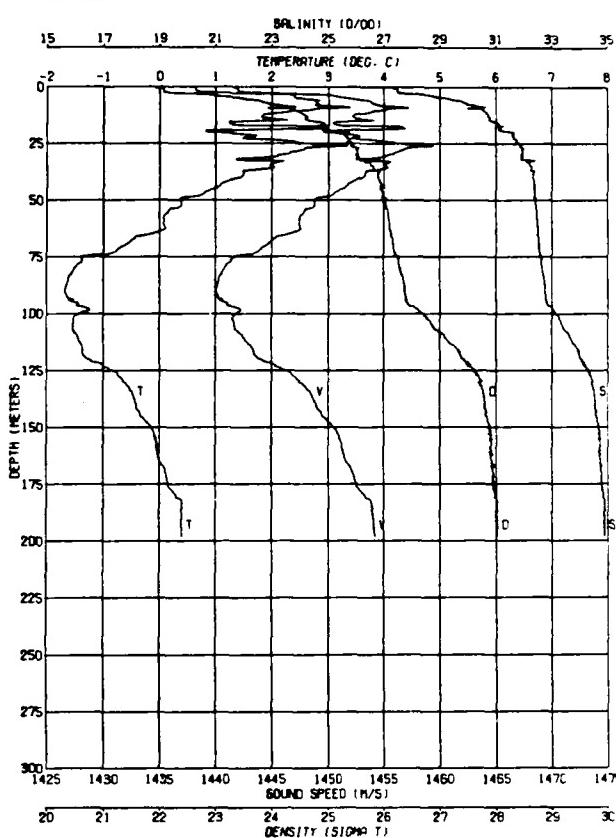
DEPTH	T (C)	V (m/s)	DENSITY	S (0/oo)
5.1	1.16	1442.1	21.53	26.83
10.1	.18	1444.2	23.2	28.92
15.1	5.31	1464.7	24.06	30.39
20.1	-.86	1441.9	24.77	30.81
25.2	-1.23	1439.9	25.06	31.14
30.1	-1.28	1439.6	25.26	31.39
35.0	2.31	1454.7	25.43	31.79
40.1	1.22	1451.6	25.73	32.10
45.3	.84	1450.5	25.89	32.27
50.2	-.81	1444.1	25.94	32.26
55.2	-.82	1442.8	25.94	32.25
60.1	-.90	1442.6	25.98	32.29
65.2	-1.51	1440.1	26.09	32.41
70.0	-1.59	1439.7	26.13	32.45
75.1	-1.58	1439.9	26.18	32.52
80.2	-1.62	1439.9	26.25	32.61
85.0	-1.64	1440.0	26.30	32.67
90.3	-1.63	1440.1	26.35	32.72
95.3	-1.63	1440.3	26.40	32.79
100.1	-1.61	1440.3	26.42	32.81
110.1	-1.53	1441.1	26.50	32.92
120.3	-1.57	1441.3	26.62	33.06
130.1	-1.57	1441.6	26.76	33.23
140.2	-1.39	1443.5	27.19	33.77
150.2	-1.19	1445.0	27.47	34.13
160.5	-.87	1446.8	27.61	34.30
170.4	-.61	1448.4	27.72	34.46
180.0	-.50	1449.3	27.79	34.55
190.3	-.37	1450.2	27.86	34.65
200.1	-.28	1450.7	27.85	34.64
210.4	-.10	1451.8	27.87	34.68
220.6	.01	1452.6	27.92	34.74
230.4	.21	1453.7	27.96	34.81
240.1	.37	1454.7	28.00	34.87
249.6	.38	1454.9	27.99	34.86

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
248	X		257	1704	Ship	71 59.7	155 25.3
249		X					

248



249

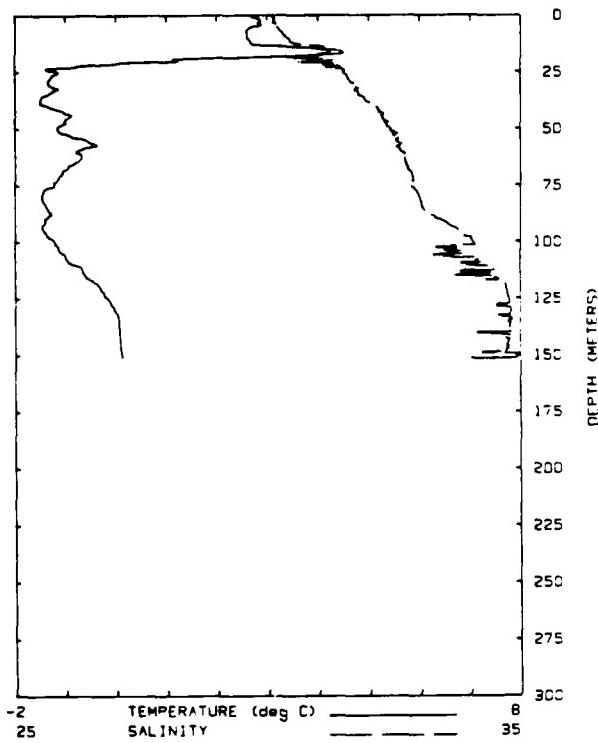


PRESSURE (kbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (ms/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec)
0.1	0.1	1.83	25.342	31.402	22.733	1446.6
2.6	2.6	2.57	26.785	31.496	23.556	1453.3
7.6	7.5	3.47	26.330	30.503	24.267	1458.6
12.5	12.5	3.11	26.169	30.647	24.432	1457.4
17.5	17.4	0.81	27.033	31.486	25.267	1446.4
22.5	22.4	2.28	26.539	31.903	25.497	1455.5
27.5	27.3	1.86	26.049	31.916	25.551	1452.9
32.6	32.4	1.95	26.167	32.173	25.764	1452.6
37.5	37.3	1.35	26.106	32.300	25.878	1452.2
42.6	42.4	0.79	27.708	32.373	25.970	1449.8
47.6	47.4	0.63	27.591	32.384	25.988	1449.2
52.6	52.5	0.26	27.331	32.438	26.051	1447.7
57.6	57.5	-0.05	27.085	32.645	26.070	1446.4
62.6	62.6	-0.30	26.843	32.373	26.023	1445.2
66.1	67.7	-0.79	26.581	32.510	26.159	1443.2
73.5	73.1	-1.28	26.189	32.541	26.102	1441.0
78.9	78.4	-1.50	26.056	32.594	26.241	1440.1
84.4	83.8	-1.52	26.082	32.650	26.293	1440.1
88.9	88.3	-1.53	26.086	32.683	26.313	1440.2
93.1	94.5	-1.37	26.263	32.730	26.347	1441.1
100.5	99.9	-1.25	26.492	32.899	26.481	1442.0
106.0	105.3	-1.54	26.522	33.264	26.784	1441.2
111.5	110.7	-1.90	26.896	33.451	26.935	1441.8
116.8	118.1	-1.39	26.945	33.673	27.111	1442.7
122.0	121.2	-1.31	27.162	33.876	27.275	1443.4
127.2	126.4	-0.78	27.788	34.158	27.484	1446.3
132.4	131.5	-0.60	28.068	34.308	27.596	1447.5
137.6	136.6	-0.42	28.318	34.430	27.688	1448.6
142.7	141.7	-0.33	28.437	34.488	27.730	1449.1
147.6	146.7	-0.23	28.590	34.563	27.786	1449.6
152.4	151.3	-0.13	28.691	34.593	27.804	1450.4
152.4	151.3	-0.12	28.710	34.613	27.821	1450.4

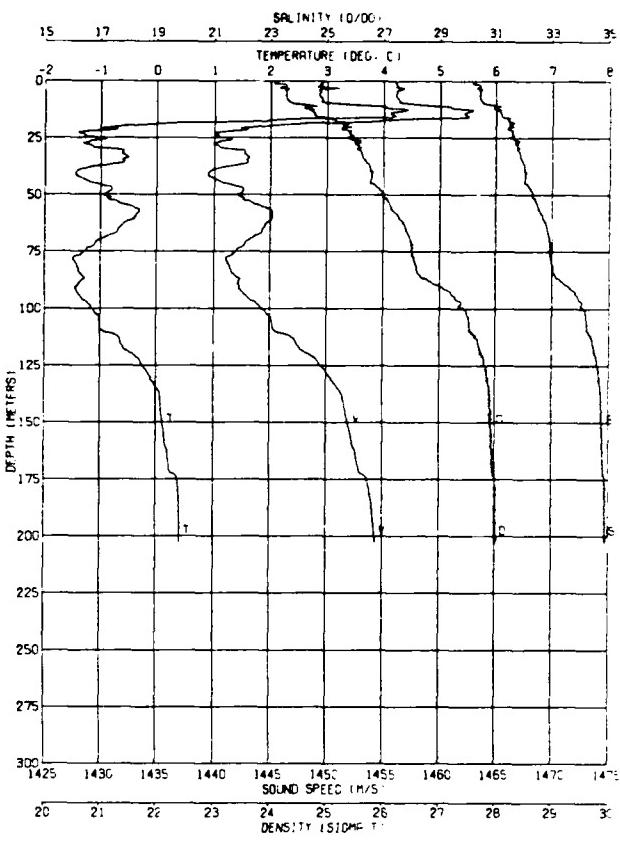
DEPTH	T (C)	V (M/S)	DENSITY	S (0/oo)
5.6	2.69	1452.7	23.57	29.49
10.4	2.65	1455.0	24.38	30.52
15.3	1.55	1452.2	24.73	30.90
20.1	1.15	1450.5	25.38	31.67
25.4	2.89	1457.3	25.44	31.87
30.1	2.16	1455.5	25.49	31.89
35.3	2.05	1455.3	25.81	32.27
40.1	1.42	1453.0	25.89	32.33
45.1	.92	1451.1	25.96	32.38
50.3	.38	1448.8	26.03	32.42
55.1	.16	1447.8	26.07	32.46
60.2	.06	1447.4	26.10	32.49
65.3	-.24	1446.2	26.11	32.49
70.0	-.65	1444.5	26.16	32.53
75.1	-1.36	1441.6	26.27	32.64
80.1	-1.51	1440.8	26.31	32.68
85.1	-1.62	1440.3	26.35	32.73
90.1	-1.68	1440.0	26.38	32.76
95.1	-1.47	1440.9	26.40	32.79
100.2	-1.42	1441.8	26.69	33.15
110.3	-1.45	1442.5	27.08	33.63
120.3	-1.23	1444.2	27.44	34.09
130.1	-.62	1447.5	27.68	34.41
140.3	-.41	1449.0	27.78	34.54
150.1	-.15	1450.4	27.84	34.63
160.4	-.03	1451.4	27.90	34.72
170.2	.11	1452.2	27.94	34.78
180.0	.30	1453.3	27.98	34.84
190.0	.40	1454.1	28.02	34.89
197.6	.40	1454.2	28.00	34.87

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
250	X		257	1802	Ship	71 56.8	155 21.8
251		X					

250



251

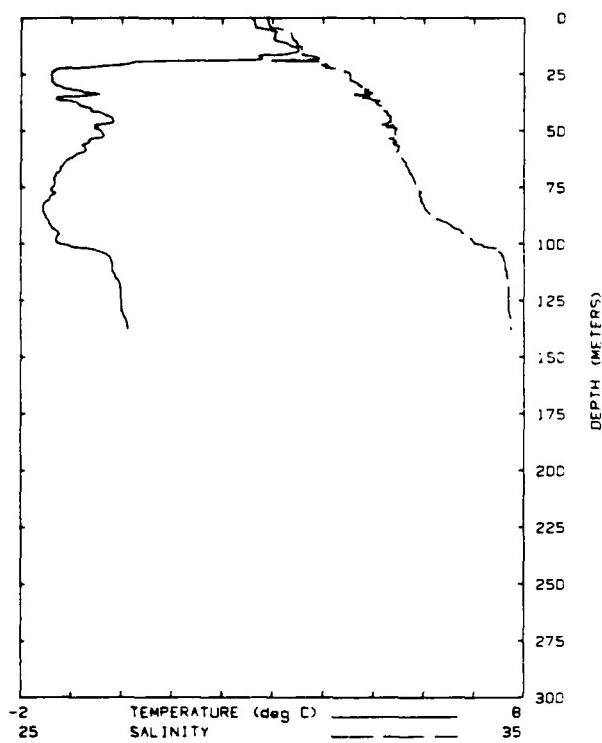


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
0.5	0.5	2.70	27.380	30.108	24.036	1454.7
4.6	4.5	2.89	27.583	30.172	24.072	1455.6
9.6	9.6	2.58	27.522	30.361	24.245	1454.7
14.6	14.7	3.91	29.177	31.088	24.712	1461.4
20.0	19.8	1.14	27.135	31.283	25.085	1449.6
25.1	25.0	-1.14	25.518	31.508	25.353	1439.5
30.4	30.2	-1.33	25.808	31.892	25.507	1438.9
35.7	35.5	-1.41	25.932	31.811	25.805	1438.8
41.0	40.8	-1.28	25.895	32.182	25.865	1439.9
46.3	46.0	-0.98	26.219	32.281	25.973	1441.6
51.6	51.3	-1.14	26.214	32.441	26.108	1441.1
56.9	56.6	-0.47	26.076	32.608	26.221	1444.6
62.1	61.7	-0.66	26.762	32.706	26.307	1442.8
67.2	66.8	-0.96	26.820	32.767	26.365	1442.8
72.5	72.0	-1.14	26.535	32.867	26.452	1442.0
77.7	77.2	-1.42	26.358	32.934	26.514	1441.9
83.0	82.4	-1.43	26.428	33.035	26.595	1441.1
88.2	87.7	-1.27	26.882	33.208	26.732	1442.2
93.5	92.9	-1.46	26.825	33.806	27.059	1441.9
98.7	98.1	-1.33	27.214	33.893	27.368	1443.1
104.0	103.3	-1.12	27.209	33.748	27.164	1443.8
109.2	108.5	-0.95	27.616	34.101	27.443	1445.2
114.5	113.7	-0.84	28.137	34.458	27.719	1447.2
119.7	118.8	-0.35	28.568	34.703	27.805	1449.0
124.9	124.0	-0.22	28.718	34.748	27.834	1449.7
130.2	129.3	-0.04	28.813	34.800	27.868	1450.7
135.3	134.4	0.06	28.987	34.783	27.857	1451.2
140.4	139.4	0.08	29.005	34.785	27.849	1451.4
145.5	144.5	0.09	29.010	34.774	27.840	1451.5
150.7	149.6	0.11	29.206	35.009	28.126	1452.0
152.8	151.5	0.12	29.016	34.739	27.808	1451.7

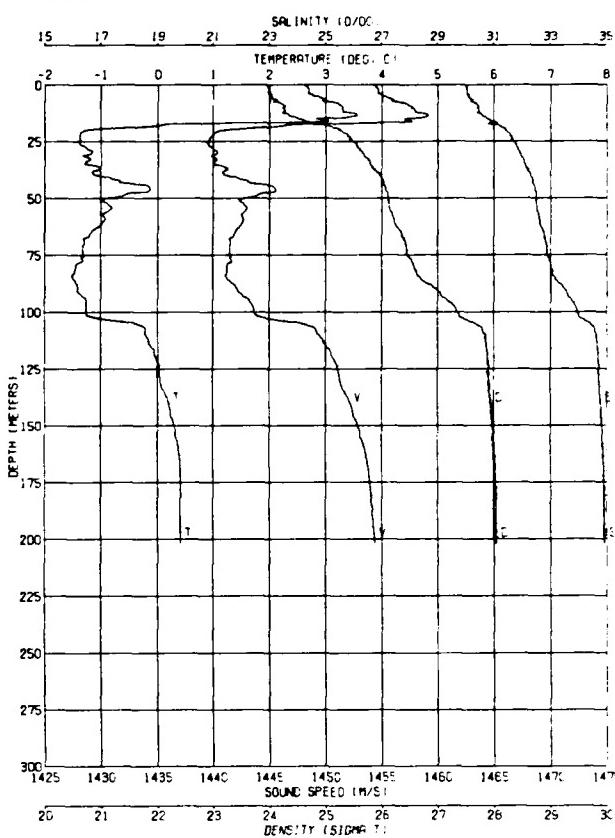
DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.2	2.89	1456.2	24.29	30.44
11.2	3.49	1459.3	25.08	31.47
15.1	4.17	1462.3	24.82	31.22
20.1	-.68	1444.4	25.37	31.57
25.1	-1.03	1441.3	25.35	31.51
30.1	-.88	1441.6	25.52	31.73
35.0	-.61	1443.0	25.65	31.89
40.1	-1.45	1439.7	25.75	32.00
45.1	-1.24	1440.7	25.99	32.29
50.0	-.93	1442.3	26.01	32.32
55.2	-.45	1444.4	26.14	32.51
60.1	-.39	1445.2	26.27	32.67
65.2	-.69	1444.3	26.40	32.82
70.2	-1.03	1443.0	26.45	32.87
75.1	-1.28	1442.0	26.49	32.91
80.1	-1.45	1441.3	26.53	32.95
85.3	-1.34	1441.9	26.65	33.11
90.3	-1.41	1442.3	27.01	33.54
95.1	-1.36	1443.0	27.28	33.88
100.5	-1.13	1444.4	27.47	34.13
110.2	-.93	1445.7	27.61	34.30
120.4	-.41	1448.6	27.82	34.60
130.1	-.11	1450.3	27.88	34.68
140.3	.08	1451.5	27.94	34.77
150.3	.11	1452.0	27.96	34.79
160.2	.17	1452.4	27.95	34.80
170.1	.25	1452.9	27.96	34.81
180.4	.40	1453.9	28.01	34.88
190.2	.42	1454.2	28.02	34.90
200.2	.42	1454.4	28.02	34.89
202.9	.43	1454.5	28.03	34.91

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
252	X		257	1855	Ship	71 54.0	155 17.7
253		X					

252



253

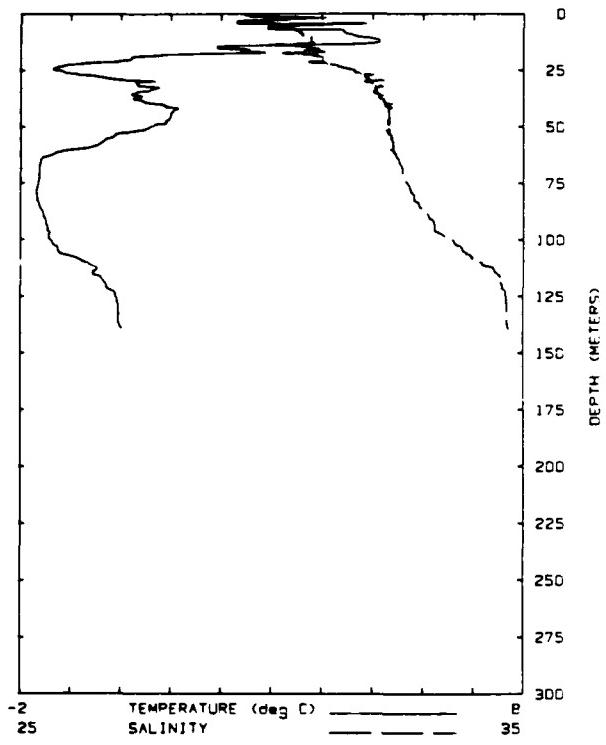


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
0.5	0.5	2.84	27.186	29.916	23.887	1454.2
0.4	0.4	2.82	27.167	29.807	23.881	1454.1
4.8	4.8	2.78	27.492	30.142	24.055	1455.2
10.0	10.0	3.07	27.840	30.416	24.252	1456.8
25.1	15.0	3.52	28.468	30.819	24.375	1459.1
20.1	20.0	0.25	28.231	31.026	24.916	1445.2
25.0	24.8	-1.39	23.339	31.533	25.379	1438.3
30.2	30.0	-1.31	25.532	31.708	25.520	1439.0
35.3	35.1	-1.02	25.783	31.711	25.514	1440.5
40.3	40.1	-0.61	28.482	32.210	25.804	1443.2
45.4	45.1	-0.18	28.908	32.343	25.894	1445.4
50.4	50.1	-0.41	28.789	32.427	26.071	1444.5
55.5	55.2	-0.64	28.633	32.461	26.108	1443.6
60.6	60.2	-0.87	28.476	32.500	26.147	1442.6
66.0	65.6	-1.16	28.366	32.650	26.285	1441.6
71.7	71.3	-1.34	28.330	32.800	26.403	1441.0
77.0	76.6	-1.40	28.364	32.809	26.493	1441.0
83.0	82.4	-1.54	28.309	32.893	26.565	1440.5
89.0	88.4	-1.50	28.472	33.186	26.704	1441.0
94.7	94.1	-1.30	27.043	33.727	27.153	1442.8
100.4	99.7	-1.26	27.282	34.007	27.378	1443.5
105.3	104.6	-0.30	28.502	34.562	27.789	1448.8
110.2	109.5	-0.18	28.650	34.621	27.830	1449.5
115.0	114.3	-0.12	28.731	34.850	27.858	1449.9
119.8	119.0	-0.02	28.636	34.695	27.873	1450.5
124.5	123.7	-0.00	28.868	34.700	27.884	1450.6
129.3	128.4	0.01	28.882	34.702	27.886	1450.6
133.9	133.0	0.08	28.873	34.738	27.910	1451.2
138.6	137.6	0.13	28.022	34.746	27.914	1451.5
140.7	137.7	0.13	28.023	34.745	27.914	1451.5

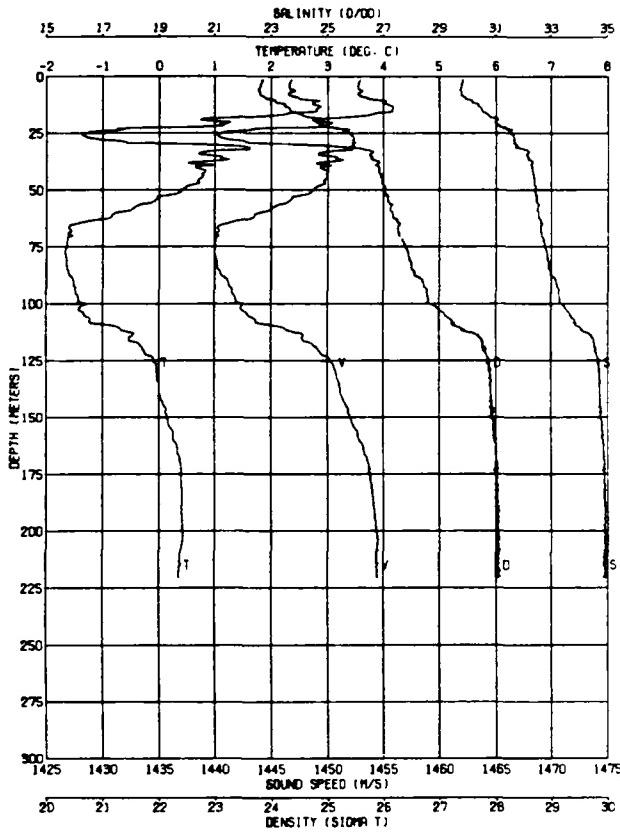
DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
5.1	2.82	1455.3	24.07	30.16
10.1	3.31	1457.7	24.24	30.41
15.3	2.78	1457.0	24.59	30.82
20.3	-1.30	1441.1	25.18	31.31
25.1	-1.37	1440.0	25.40	31.57
30.1	-1.16	1440.7	25.55	31.76
35.3	-1.27	1440.3	25.76	32.01
40.2	-1.05	1441.4	25.96	32.27
45.6	-14	1445.5	26.08	32.45
50.2	-89	1442.9	26.10	32.45
55.2	-84	1443.0	26.14	32.49
60.2	-95	1442.7	26.21	32.57
65.1	-1.17	1442.0	26.33	32.72
70.0	-1.29	1441.6	26.43	32.84
75.4	-1.30	1441.7	26.47	32.88
80.1	-1.45	1441.2	26.57	33.00
85.1	-1.50	1441.3	26.69	33.15
90.2	-1.41	1442.2	26.98	33.51
95.2	-1.25	1443.3	27.19	33.78
100.1	-1.26	1443.7	27.36	33.98
110.2	-20	1449.4	27.89	34.59
120.1	-03	1450.6	27.90	34.72
130.1	.05	1451.2	27.92	34.75
140.2	.20	1452.2	27.96	34.81
150.2	.29	1452.8	27.98	34.84
160.1	.37	1453.5	28.03	34.91
170.1	.41	1453.8	28.02	34.90
180.0	.41	1454.0	28.05	34.94
190.3	.41	1454.2	28.04	34.92
200.3	.41	1454.3	28.03	34.91
201.5	.41	1454.4	28.03	34.91

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
254	X		257	2016	Ship	71 50.2	155 13.3
255		X					

254



255



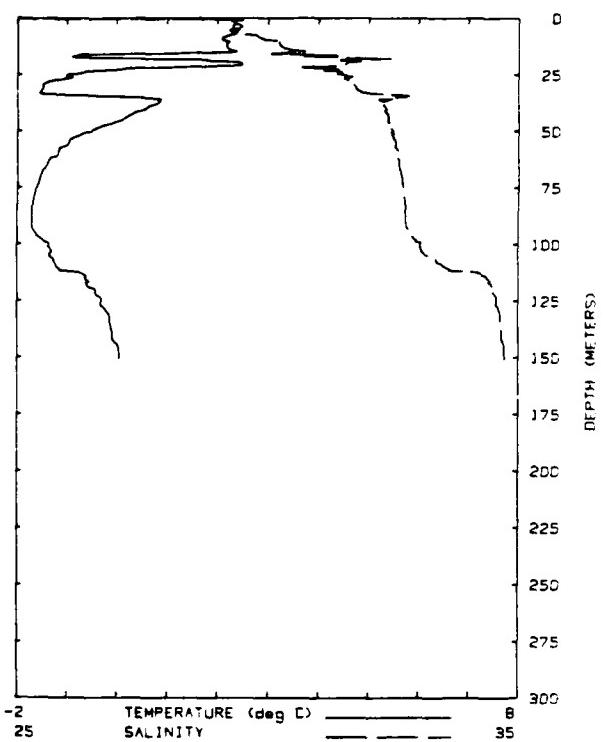
PRESSURE (kbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (M/sec.)
0.7	0.7	26.64	27.256	30.894	23.848	1454.3
4.6	4.5	27.76	28.822	31.804	25.460	1457.3
8.8	9.7	24.63	28.347	30.807	24.261	1463.7
15.1	15.1	1.84	27.310	30.721	24.578	1452.4
20.5	20.4	0.18	26.150	30.890	24.890	1444.9
25.8	25.7	-1.13	25.624	31.642	25.461	1439.7
31.2	31.1	0.33	27.057	32.013	25.705	1447.1
36.7	36.5	0.40	27.288	32.208	25.859	1447.8
42.1	41.9	1.12	27.872	32.387	25.847	1451.3
47.4	47.1	0.97	27.823	32.328	25.825	1450.7
52.7	52.4	0.23	27.216	32.313	25.851	1447.4
58.1	57.7	-0.40	26.782	32.405	26.053	1444.7
63.4	63.5	-1.47	25.973	32.487	26.137	1439.8
68.8	68.9	-1.82	25.954	32.589	26.215	1438.3
75.5	75.0	-1.84	26.011	32.689	26.328	1439.5
81.8	81.1	-1.86	26.086	32.829	26.435	1438.7
87.7	87.1	-1.57	26.327	33.044	26.607	1440.5
93.5	92.9	-1.48	26.536	33.230	26.755	1441.3
99.7	98.1	-1.43	26.713	33.416	26.804	1441.8
104.4	103.7	-1.25	27.136	33.787	27.200	1443.3
110.1	109.3	-0.77	27.711	34.032	27.381	1445.9
115.2	114.4	-0.55	28.213	34.451	27.710	1447.6
120.3	119.4	-0.31	28.512	34.575	27.789	1449.0
125.3	124.5	-0.08	28.780	34.857	27.854	1450.2
130.4	129.5	-0.03	28.627	34.876	27.869	1450.6
135.4	134.5	-0.03	28.829	34.978	27.869	1450.6
140.3	139.4	0.02	28.888	34.702	27.885	1451.0
140.2	139.3	0.03	28.809	34.710	27.891	1451.1

DEPTH	T (C)	V (M/S)	DENSITY	S (0/00)
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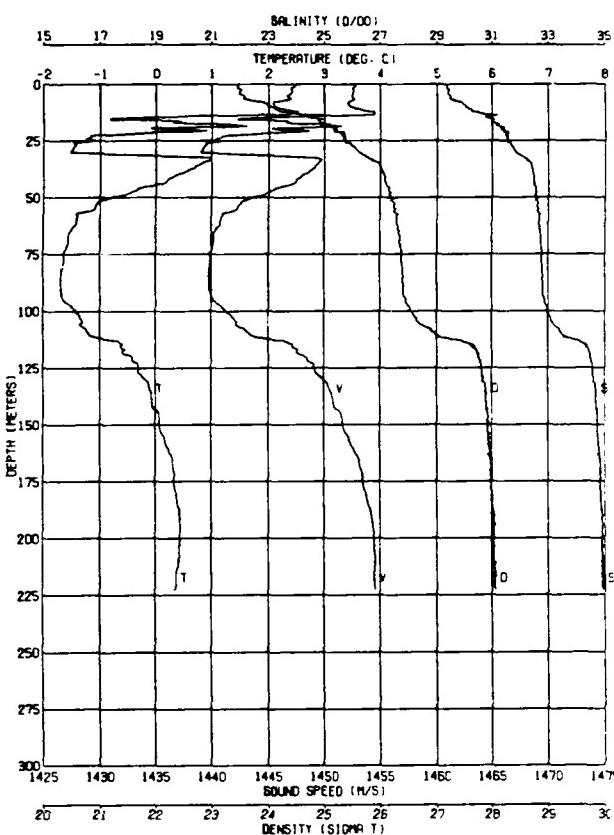
5.6	2.35	1452.7	23.78	29.75
10.4	2.69	1454.6	24.08	30.15
15.3	2.81	1455.8	24.35	30.50
20.3	1.28	1450.2	24.80	30.95
25.1	-1.31	1440.6	25.40	31.57
30.2	1.00	1448.7	25.47	31.74
35.1	1.08	1450.4	25.77	32.13
40.3	.70	1449.4	25.94	32.32
45.3	.72	1449.8	25.99	32.39
50.3	.41	1448.6	26.01	32.40
55.3	-.13	1446.5	26.08	32.46
60.3	-.79	1443.8	26.16	32.52
65.3	-1.55	1440.6	26.27	32.63
70.3	-1.54	1440.3	26.26	32.62
75.4	-1.65	1440.0	26.39	32.77
80.3	-1.65	1440.1	26.48	32.88
85.1	-1.62	1440.3	26.52	32.94
90.1	-1.52	1441.1	26.70	33.16
95.1	-1.47	1441.6	26.79	33.27
100.1	-1.28	1442.6	26.86	33.37
110.2	-.73	1445.9	27.34	33.98
120.0	-.29	1449.1	27.80	34.57
130.1	-.04	1450.7	27.89	34.71
140.3	.01	1451.2	27.91	34.73
150.5	.14	1452.0	27.92	34.75
160.6	.27	1452.9	27.97	34.82
170.4	.39	1453.7	28.02	34.89
180.5	.41	1454.0	28.03	34.91
190.4	.41	1454.2	28.04	34.92
200.3	.42	1454.4	28.02	34.89
210.4	.39	1454.4	28.01	34.88
220.2	.36	1454.4	28.00	34.87
220.2	.36	1454.5	28.06	34.94

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
256	X		257	2109	Ship	71 48.5	155 11.6
257		X					

256



257



PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec.)
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1.3	1.3	2.37	26.449	29.271	23.392	1452.1
6.2	6.1	2.37	26.462	29.281	23.399	1452.3
11.2	11.1	2.19	27.091	30.216	24.158	1452.8
16.1	16.0	0.39	25.590	30.058	24.132	1444.5
20.9	20.8	2.48	26.394	31.526	25.181	1455.9
25.7	25.6	-1.00	25.831	31.516	25.356	1440.1
31.0	30.9	-1.48	25.426	31.743	25.551	1436.3
36.4	36.2	0.84	27.628	32.221	25.846	1449.8
41.4	41.1	0.50	27.425	32.308	25.934	1448.4
46.2	46.0	-0.01	27.078	32.386	26.021	1446.3
51.1	50.8	-0.59	26.854	32.442	26.090	1433.7
56.4	56.1	-0.98	26.424	32.552	26.192	1442.1
62.2	61.9	-1.27	26.206	32.569	26.215	1440.9
68.3	67.8	-1.50	26.084	32.644	26.281	1440.0
74.2	73.7	-1.59	26.040	32.680	26.313	1439.7
78.5	78.0	-1.85	26.017	32.720	26.346	1439.5
83.2	84.7	-1.70	26.009	32.746	26.366	1439.4
81.2	80.8	-1.70	26.017	32.762	26.381	1439.5
87.1	98.5	-1.80	26.183	32.859	26.465	1440.3
102.9	102.2	-1.33	26.548	33.070	26.621	1441.9
108.1	107.4	-1.26	26.829	33.373	26.864	1442.8
113.1	112.5	-0.78	27.622	34.200	27.517	1446.1
118.2	117.4	-0.51	28.157	34.443	27.706	1447.4
123.2	122.4	-0.41	28.381	34.526	27.764	1448.5
128.1	127.2	-0.31	28.513	34.571	27.786	1449.1
133.0	132.1	-0.13	28.719	34.647	27.849	1450.1
137.8	137.0	-0.11	28.753	34.859	27.857	1450.3
142.7	141.7	-0.08	28.781	34.865	27.861	1450.5
147.7	146.8	0.04	28.928	34.715	27.895	1451.2
151.8	150.8	0.06	28.946	34.718	27.896	1451.4

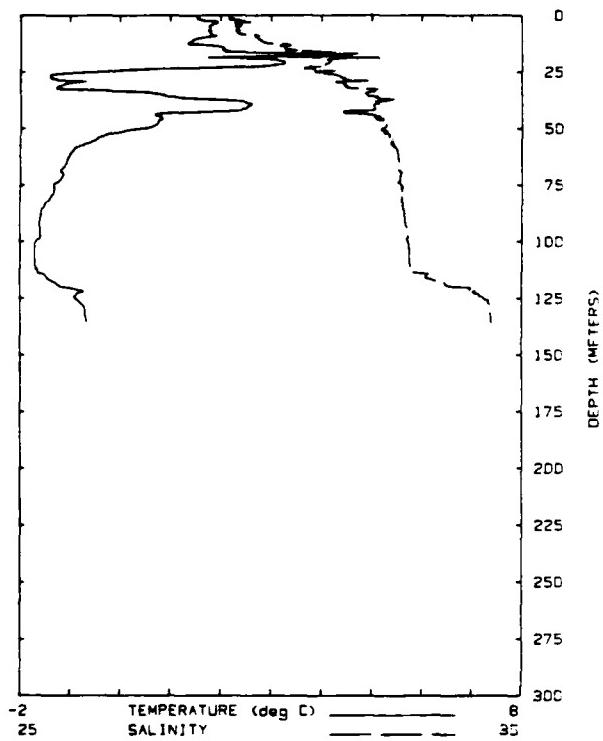
DEPTH	T (C)	V (M/S)	DENSITY	S (0/oo)
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5.1	2.34	1452.5	23.57	29.49
10.3	2.15	1452.5	24.06	30.09
15.3	-0.82	1443.0	24.90	30.98
20.3	.58	1447.2	25.23	31.43
25.4	-1.16	1440.7	25.38	31.55
30.2	-1.52	1439.1	25.63	31.84
35.3	.81	1449.5	26.00	32.40
40.2	.34	1448.0	26.08	32.47
45.1	-.16	1446.3	26.15	32.54
50.2	-.83	1443.6	26.26	32.64
55.3	-1.11	1442.2	26.26	32.64
60.3	-1.43	1440.8	26.30	32.67
65.2	-1.54	1440.3	26.34	32.72
70.3	-1.57	1440.1	26.35	32.73
75.1	-1.64	1439.9	26.39	32.77
80.1	-1.67	1439.9	26.40	32.79
85.1	-1.70	1439.8	26.42	32.81
90.1	-1.68	1439.9	26.41	32.79
95.2	-1.64	1440.2	26.45	32.85
100.1	-1.42	1441.4	26.57	33.00
110.2	-1.19	1443.4	26.97	33.50
120.1	-.40	1448.4	27.73	34.48
130.1	-.16	1450.0	27.84	34.63
140.2	-.06	1450.8	27.88	34.69
150.1	.07	1451.7	27.93	34.76
160.4	.23	1452.7	27.99	34.84
170.1	.33	1453.3	27.96	34.81
180.5	.37	1453.8	28.00	34.87
190.2	.43	1454.3	28.05	34.94
200.4	.44	1454.5	28.05	34.94
210.4	.41	1454.5	28.02	34.90
220.3	.37	1454.5	28.05	34.94
222.2	.35	1454.5	28.07	34.95

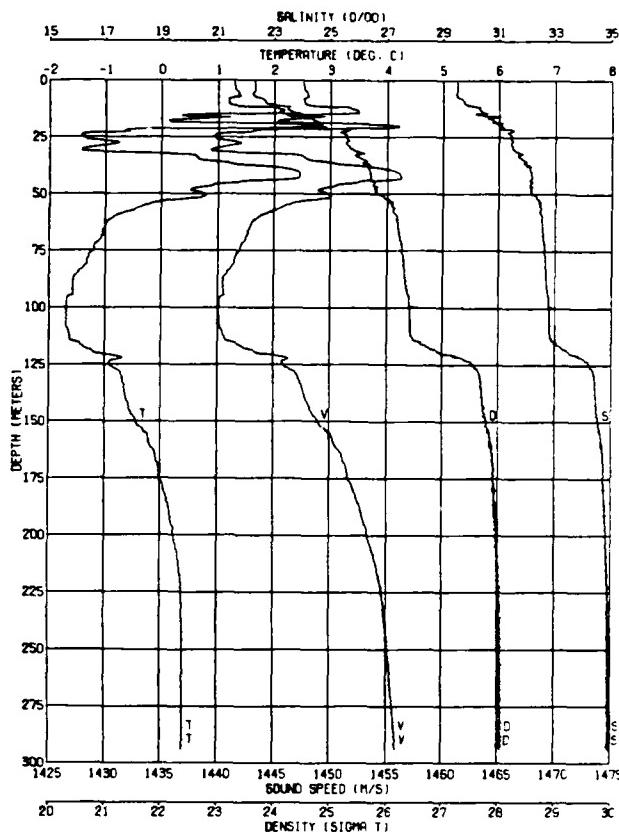
Station ASL Julian GMT  
Number Cast Cast Day hhmm Platform Latitude Longitude

258 X 257 2210 Ship 71 45.6 155 8.2  
259 X

258



259



PRESSURE DEPTH TEMPERATURE CONDUCTIVITY SALINITY DENSITY SOUND VELOCITY  
(dbar) (M) (deg C) (msec/cm) (‰) (M/sec)

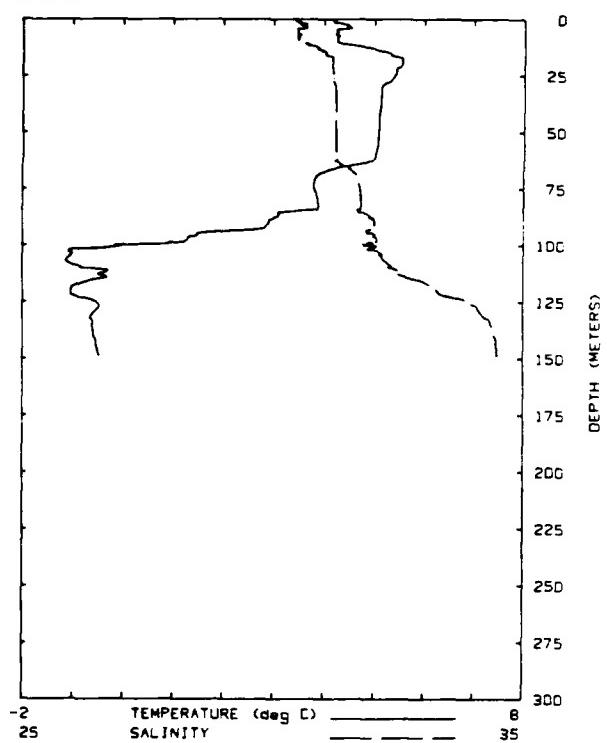
11.5	11.5	1.43	26.180	39.010	23.081	1448.9
19.0	19.5	2.42	27.053	31.053	24.809	1454.9
21.7	21.8	3.26	26.807	31.129	24.802	1450.6
26.7	26.8	-1.39	25.176	31.296	25.187	1438.1
31.8	31.8	-1.22	25.439	31.486	25.337	1439.2
36.8	36.8	1.22	27.816	32.067	25.700	1451.3
41.0	41.8	2.47	28.785	32.003	25.562	1456.8
48.7	46.5	0.78	27.597	32.229	25.856	1449.7
51.6	51.3	0.12	27.123	32.306	25.851	1446.9
56.5	56.1	-0.56	26.671	32.431	26.080	1443.9
61.4	61.0	-0.89	26.403	32.520	26.186	1442.2
66.2	65.6	-1.08	26.334	32.534	26.181	1441.8
71.7	71.3	-1.15	26.308	32.565	26.208	1441.6
77.5	77.1	-1.32	26.194	32.582	26.235	1440.9
83.3	82.8	-1.48	26.079	32.610	26.253	1440.2
88.1	88.6	-1.57	26.045	32.659	26.295	1440.0
94.4	93.6	-1.80	26.080	32.704	26.332	1440.0
99.8	99.2	-1.61	26.047	32.884	26.324	1440.0
105.6	104.9	-1.71	26.006	32.742	26.365	1439.7
111.1	110.4	-1.70	26.029	32.765	26.383	1439.9
118.8	118.1	-1.45	26.465	33.087	26.838	1441.6
121.8	121.1	-0.92	27.935	33.055	27.924	1445.3
128.9	128.1	-0.83	27.880	34.331	27.025	1446.3
131.8	130.8	-0.69	26.043	34.371	27.051	1447.1
136.7	135.7	-0.88	26.085	34.381	27.066	1447.4
139.6	135.7	-0.88	26.084	34.387	27.063	1447.4

DEPTH T (C) V (M/S) DENSITY S (O/00)

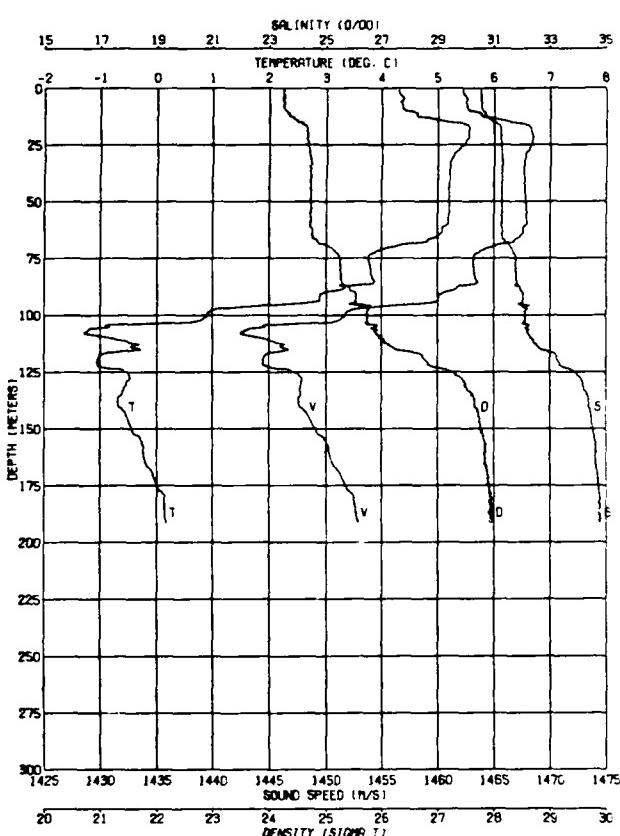
5.1	1.36	1447.9	23.64	29.50
10.1	1.19	1447.7	23.86	29.76
15.1	.61	1447.5	24.44	30.47
20.3	2.88	1456.1	24.84	31.10
25.9	-1.34	1439.8	25.29	31.43
30.1	-1.33	1439.8	25.36	31.51
35.4	.81	1446.7	25.64	31.95
40.3	2.44	1455.8	25.70	32.15
45.1	1.32	1452.3	25.80	32.19
50.0	.73	1449.9	25.86	32.23
55.3	-.32	1445.9	26.07	32.44
60.1	-.84	1443.7	26.19	32.56
65.2	-1.01	1442.8	26.19	32.56
70.2	-1.08	1442.4	26.23	32.59
75.1	-1.21	1441.9	26.27	32.64
80.1	-1.33	1441.4	26.29	32.67
85.3	-1.51	1440.7	26.31	32.68
90.2	-1.57	1440.5	26.35	32.72
95.3	-1.66	1440.3	26.39	32.78
100.2	-1.70	1440.0	26.43	32.82
110.3	-1.65	1440.3	26.42	32.81
120.3	-1.12	1443.8	27.05	33.60
130.3	-.69	1447.2	27.68	34.40
140.4	-.62	1447.9	27.72	34.45
150.4	-.44	1449.1	27.81	34.58
160.1	-.19	1450.5	27.86	34.65
170.2	-.04	1451.5	27.92	34.74
180.0	.07	1452.2	27.94	34.77
190.0	.17	1452.9	27.95	34.79
201.1	.24	1453.4	27.96	34.81
210.2	.32	1454.0	28.00	34.87
220.2	.37	1454.5	28.03	34.90
230.1	.38	1454.7	28.03	34.90
240.1	.40	1455.0	28.05	34.93
250.2	.40	1455.2	28.06	34.94
260.1	.42	1455.4	28.06	34.94
270.0	.39	1455.5	28.05	34.94
280.3	.39	1455.6	28.05	34.94
290.4	.39	1455.8	28.06	34.94
293.2	.40	1455.8	28.05	34.93

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
260	X		257	2313	Ship	71 42.8	155 4.5
261		X					

260



261

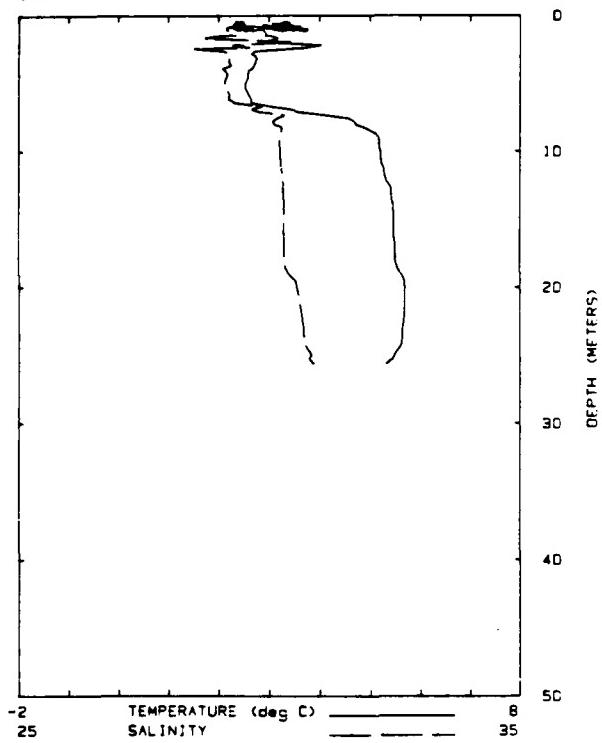


PRESSURE (dBar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	SOUND VELOCITY (m/sec)
10.5	10.4	4.30	29.010	30.530	24.233	1462.2
15.8	15.7	5.32	30.269	31.018	24.512	1467.2
21.1	21.0	5.53	30.558	31.156	24.589	1468.2
27.0	26.9	5.53	30.441	31.200	24.655	1467.6
33.3	33.1	5.13	30.302	31.230	24.701	1466.9
38.6	38.4	4.11	30.181	31.220	24.702	1466.9
44.8	44.6	5.08	30.276	31.233	24.708	1466.9
51.0	50.7	6.07	30.364	31.239	24.706	1467.0
57.3	57.0	5.05	30.251	31.334	24.713	1467.0
63.2	62.8	4.88	30.158	31.273	24.760	1466.5
69.4	68.0	3.95	28.678	31.611	25.123	1463.1
75.8	73.1	3.80	29.533	31.702	25.209	1462.6
82.0	78.4	3.86	29.704	31.726	25.223	1463.0
88.3	83.8	3.89	29.755	31.747	25.236	1463.3
94.5	88.0	2.82	29.181	32.011	25.532	1459.6
100.8	84.3	1.80	28.161	31.856	25.494	1454.5
107.0	89.6	0.86	27.594	31.856	25.554	1450.4
113.1	105.4	-1.06	26.088	32.164	25.881	1442.0
119.2	111.2	-0.29	26.931	32.452	26.087	1446.1
125.4	116.6	-0.77	26.878	33.031	26.572	1444.7
131.1	122.3	-1.01	27.069	33.416	26.882	1444.2
138.3	127.5	-0.46	26.022	34.083	27.417	1447.6
145.5	132.6	-0.64	26.052	34.324	27.611	1447.3
152.7	137.7	-0.60	26.143	34.398	27.659	1447.7
159.8	142.8	-0.54	26.235	34.452	27.710	1448.1
166.7	147.7	-0.48	26.308	34.484	27.734	1448.5
173.6	148.6	-0.47	26.321	34.487	27.736	1448.6

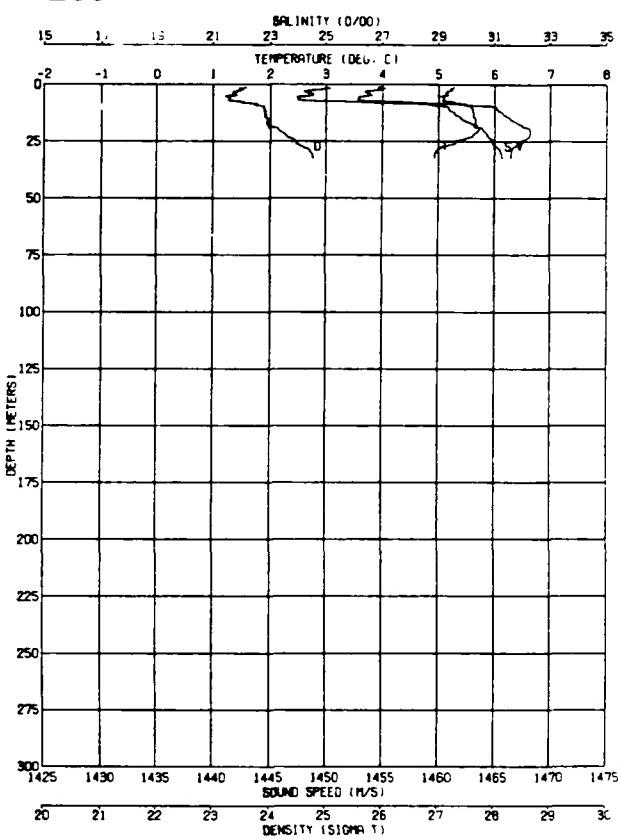
DEPTH	T (C)	V (M/S)	DENSITY	S (0/oo)
5.4	4.38	1462.6	24.26	30.55
10.1	4.45	1463.0	24.30	30.61
15.3	5.29	1466.8	24.61	31.10
20.4	5.55	1468.3	24.67	31.21
25.5	5.44	1468.2	24.69	31.23
30.1	5.28	1467.8	24.72	31.25
35.0	5.22	1467.6	24.74	31.27
40.6	5.22	1467.7	24.74	31.27
45.4	5.20	1467.7	24.73	31.25
50.2	5.20	1467.8	24.74	31.27
55.2	5.21	1467.8	24.72	31.25
60.2	5.18	1467.9	24.74	31.27
65.1	5.00	1467.3	24.76	31.28
70.2	4.18	1464.7	25.06	31.57
75.3	3.77	1463.2	25.26	31.77
80.1	3.81	1463.3	25.25	31.75
85.1	3.88	1463.6	25.28	31.79
90.1	2.97	1460.5	25.52	32.00
95.1	2.38	1458.2	25.43	31.84
100.2	.92	1451.8	25.74	32.10
110.1	-.79	1444.3	25.96	32.28
120.4	-1.04	1444.5	26.82	33.33
130.0	-.54	1447.8	27.51	34.20
140.2	-.66	1447.8	27.67	34.39
150.2	-.43	1449.1	27.78	34.55
160.4	-.24	1450.3	27.87	34.67
170.1	-.07	1451.3	27.89	34.70
180.0	.13	1452.4	27.93	34.76
190.0	.16	1452.8	27.95	34.79
191.0	.16	1452.9	27.97	34.81

Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
262	X		258	0046	Ship	71 33.7	154 49.9
263		X					

262



263



PRESSURE (dbar)	DEPTH (M)	TEMPERATURE (deg C)	CONDUCTIVITY (mS/cm)	SALINITY	DENSITY	BOUND VELOCITY (M/sec.)
3.2	3.2	2.76	26.700	30.211	23.316	1453.8
8.1	8.0	4.72	26.978	30.110	23.059	1463.4
12.0	12.0	5.42	26.893	30.285	23.024	1466.6
17.7	17.6	5.50	26.784	30.310	23.034	1467.0
22.5	22.4	5.66	26.229	30.862	24.184	1468.2
25.7	25.6	5.31	26.150	30.891	24.413	1467.1

DEPTH (M) T (C) V (M/S) DENSITY S (P/PPM)

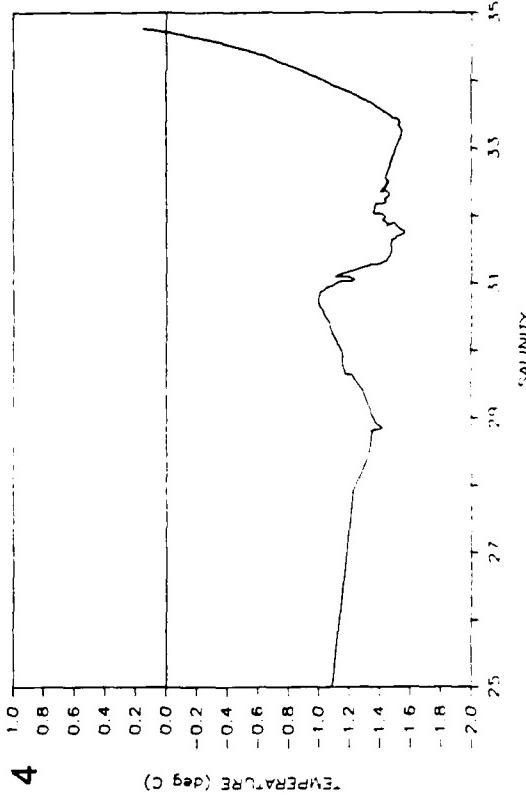
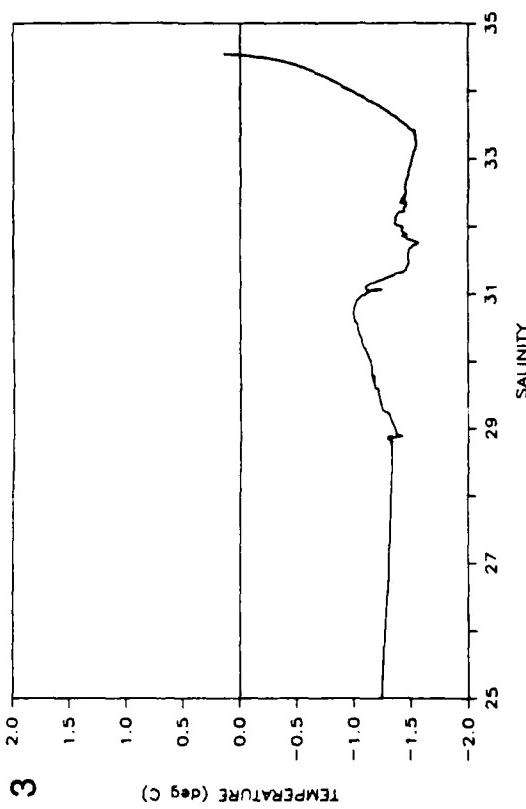
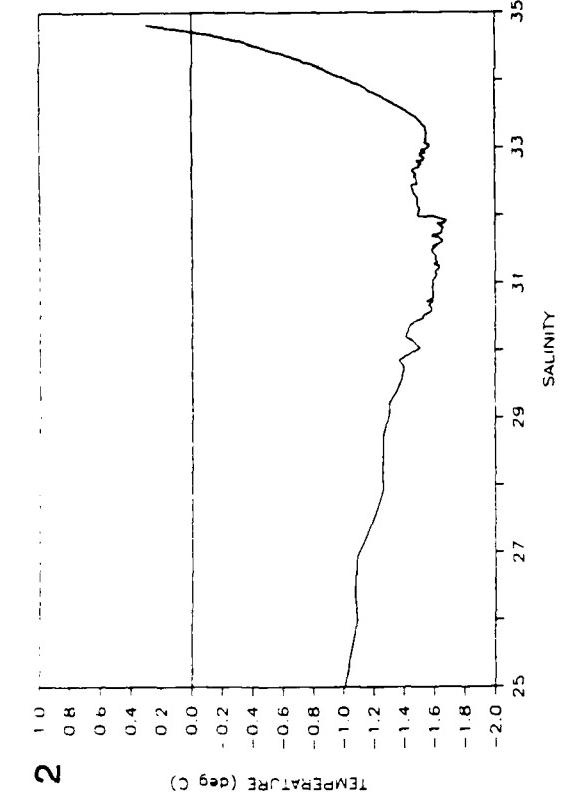
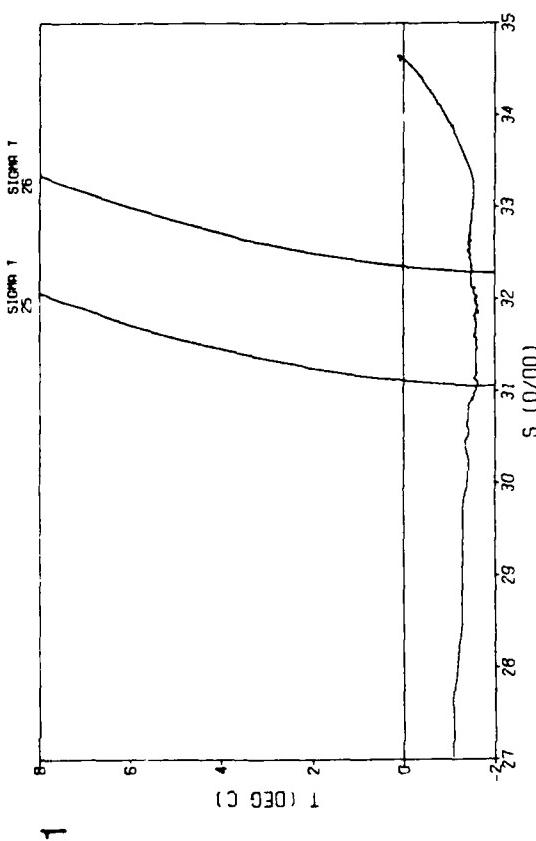
5.2	2.52	1453.2	23.29	29.15
10.3	5.16	1465.3	23.84	30.12
15.4	5.43	1466.6	23.92	30.25
20.4	5.69	1468.3	24.15	30.58
25.1	5.30	1467.4	24.44	30.91
30.1	4.93	1466.5	24.74	31.24
32.3	4.93	1466.5	24.80	31.31

## **APPENDIX B**

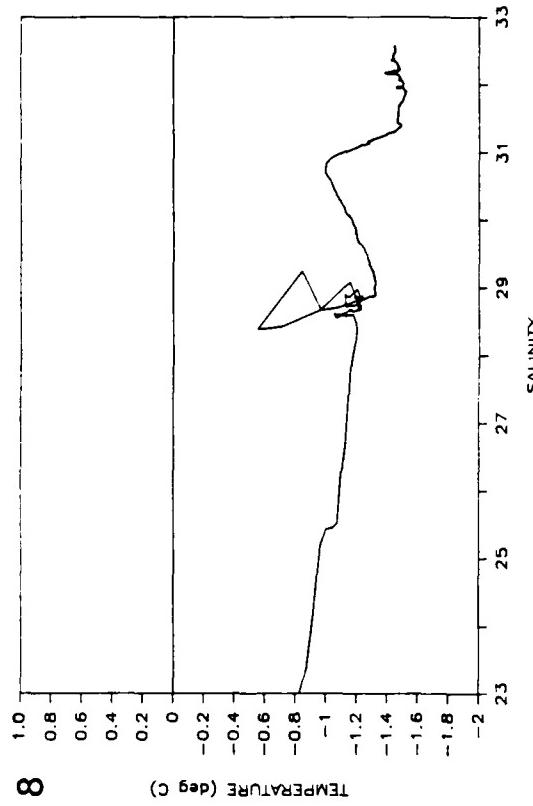
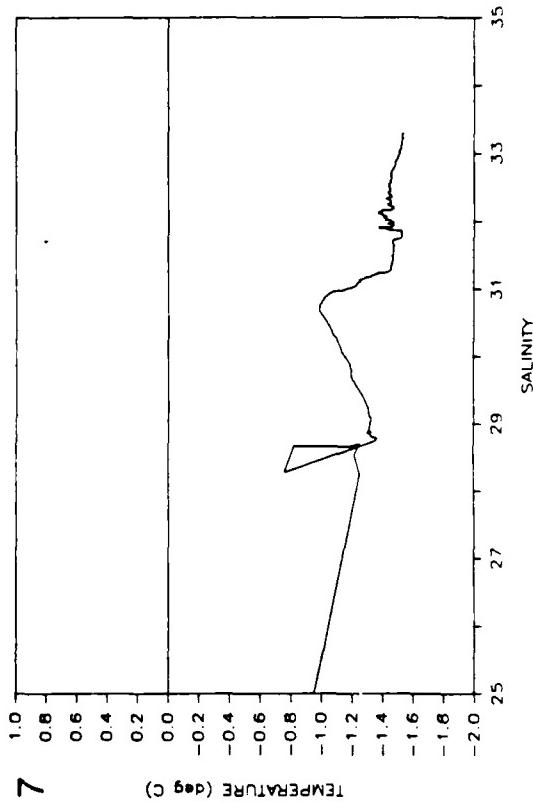
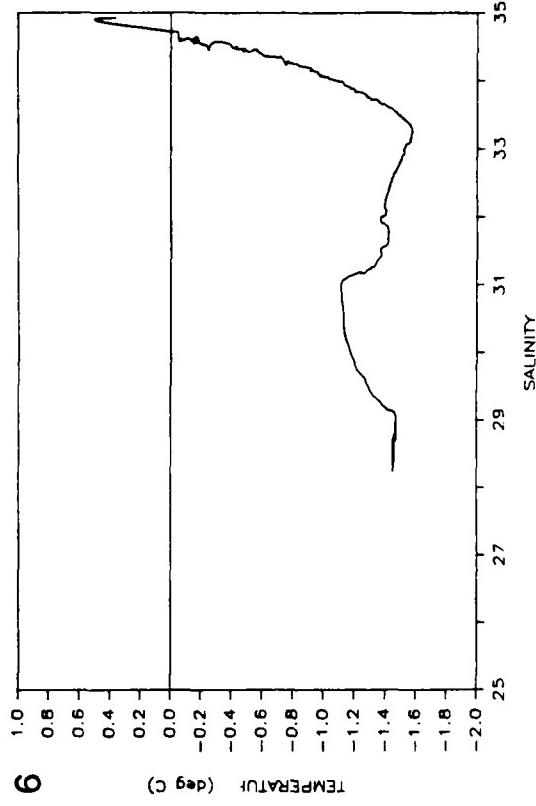
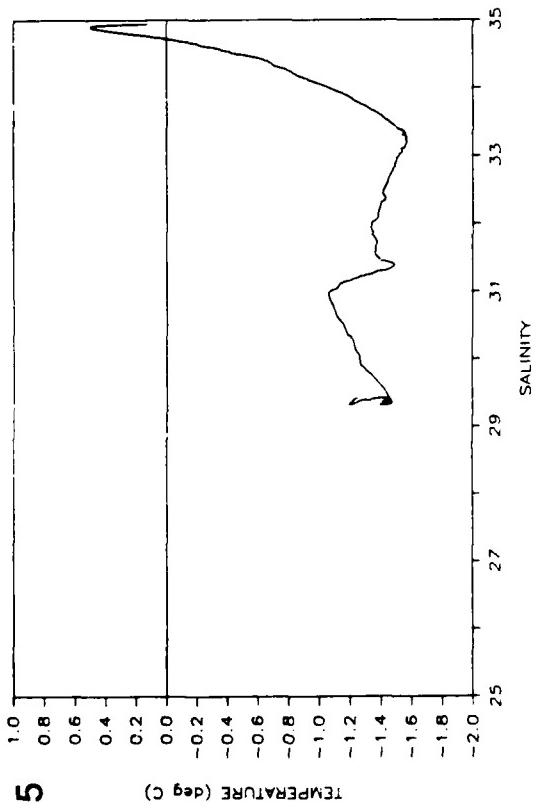
### **TS Diagrams**

This appendix contains temperature-salinity diagrams constructed from CTD profiles taken by the Applied Physics Laboratory (APL) and the Arctic Submarine Laboratory (ASL) from 17 August to 20 September 1985. See Table II for list of stations.

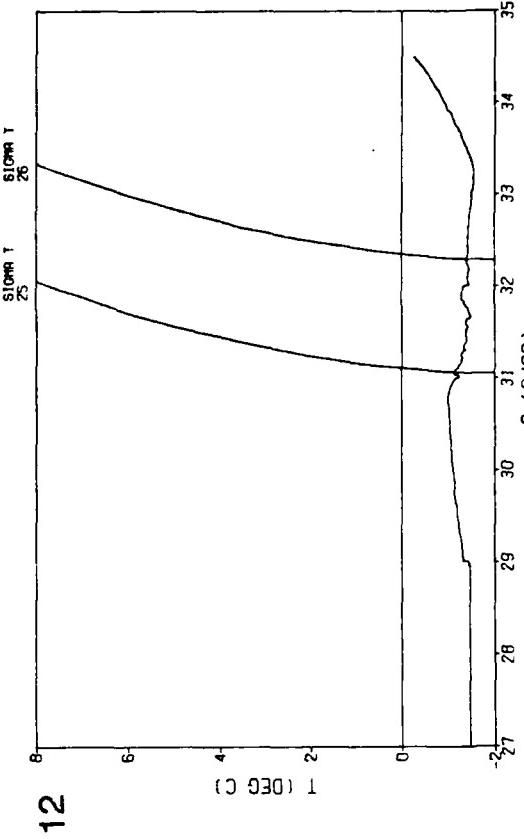
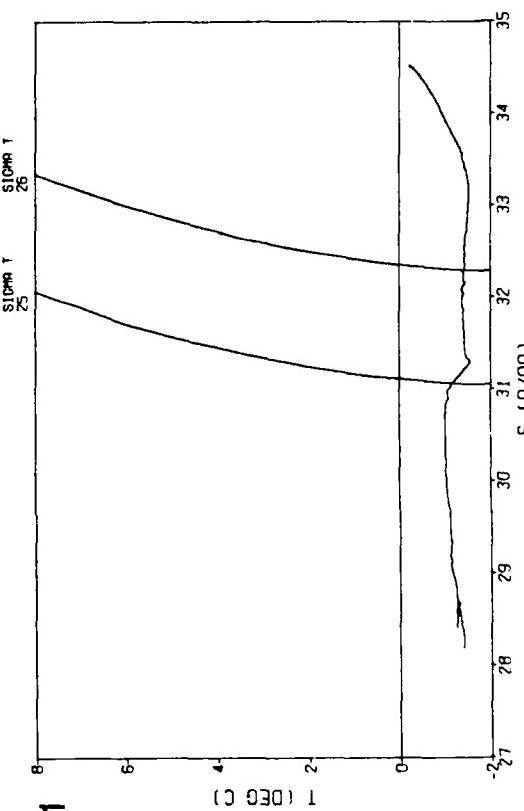
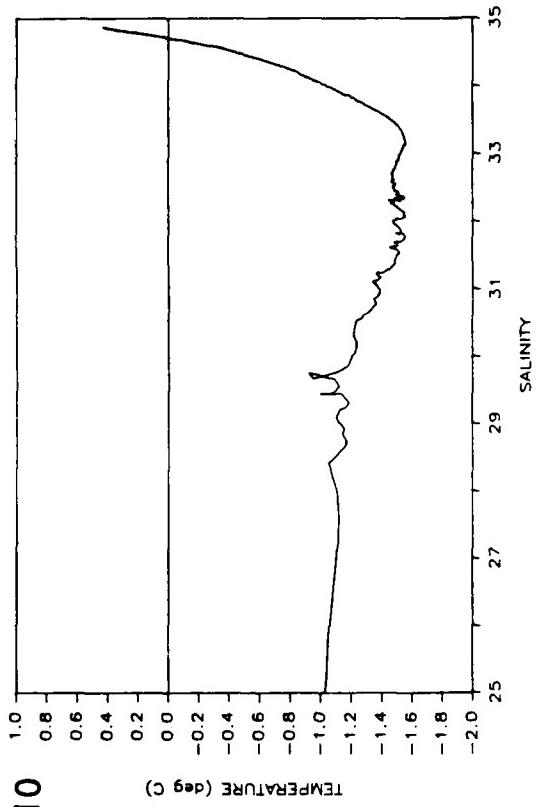
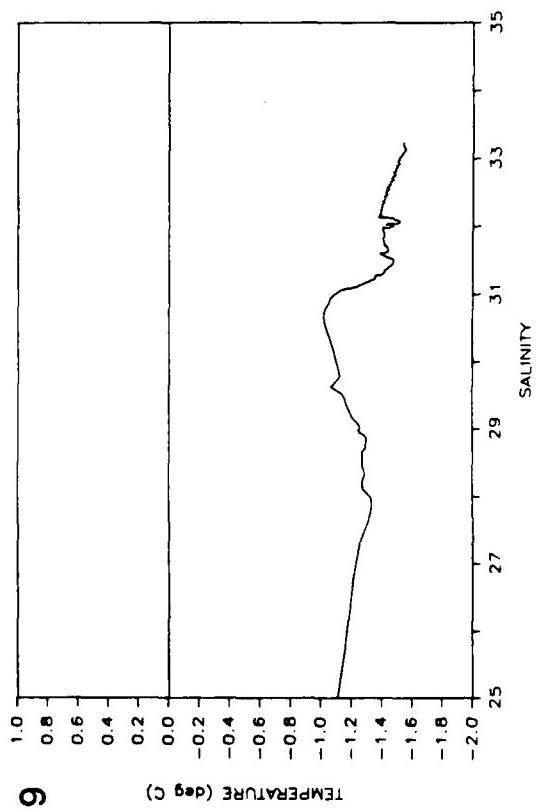
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1	X	X	229	2247	Ship	70 11.1	138 44.1
2	X	X	229	2312	Ship	70 11.1	138 44.1
3	X	X	230	1849	Ship	71 3.6	134 6.7
4	X	X	230	1918	Ship	71 3.6	134 6.7



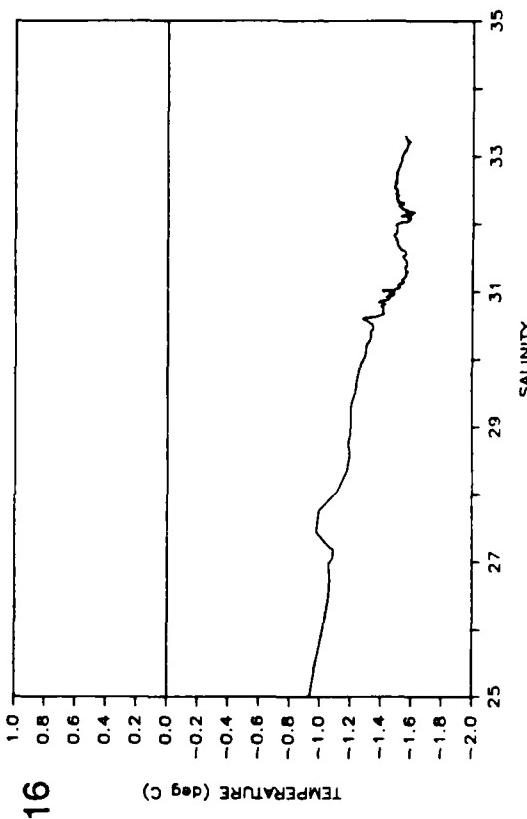
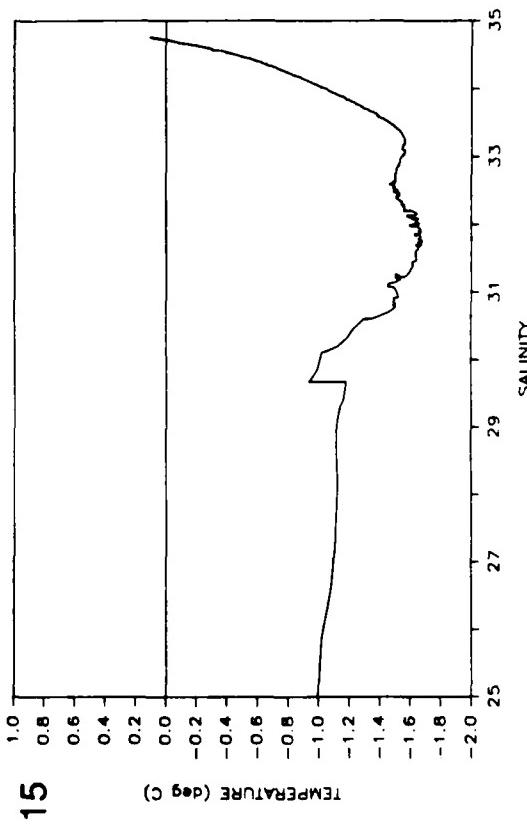
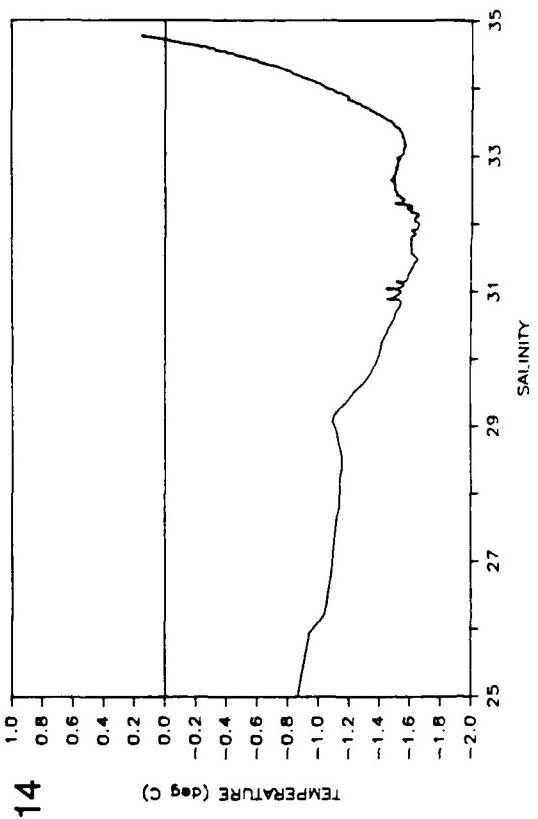
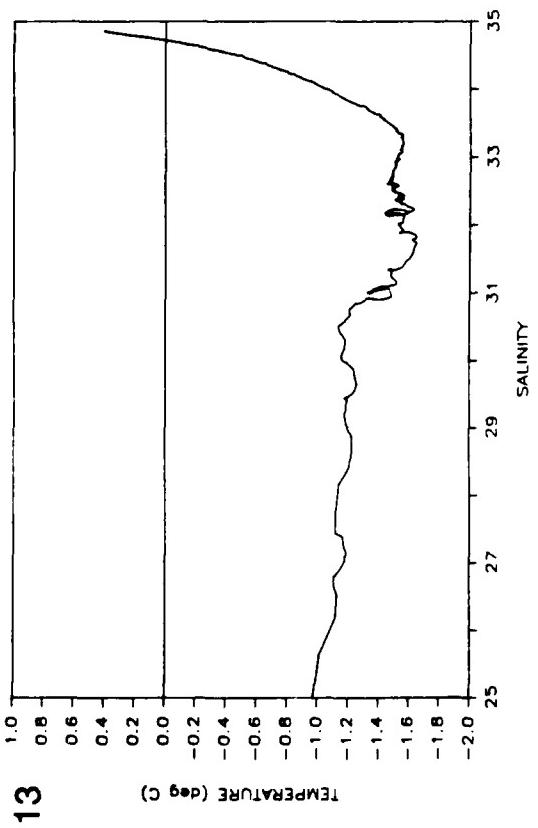
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6	X		232	0945	Ship	71 18.9	134 0.0
7	X		233	0147	Ship	71 8.2	134 9.7
8	X		233	0214	Ship	71 8.2	134 9.7



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
9	X		233	1223	Ship	70 59.8	135 19.2
10		X	233	2145	Ship	70 53.8	135 24.1
11		X	233	2230	HeLo	71 13.5	134 19.0
12		X	233	2300	HeLo	71 29.5	134 15.0



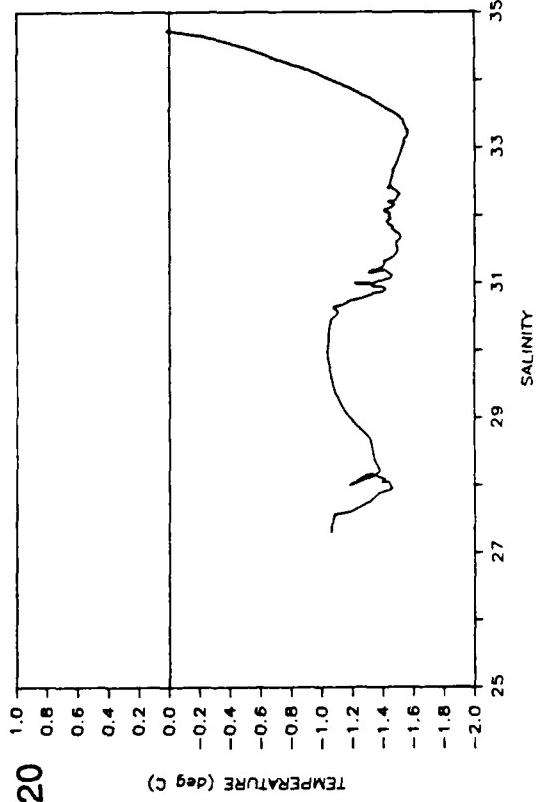
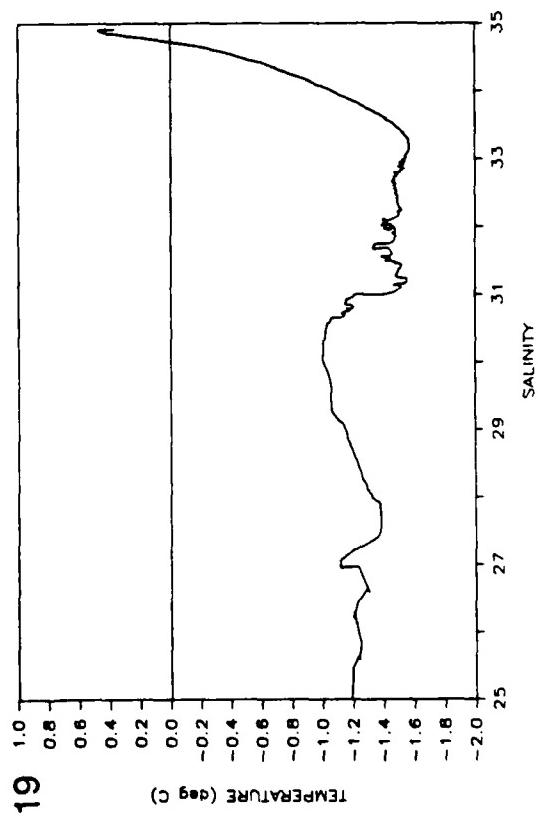
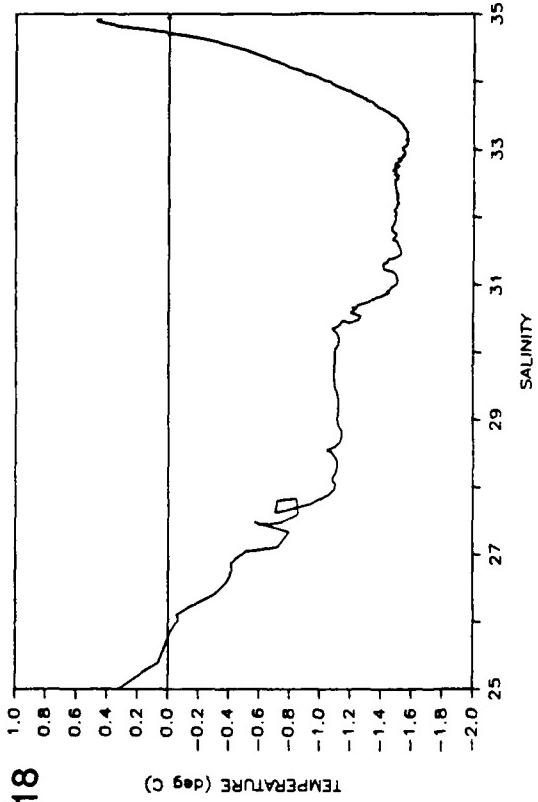
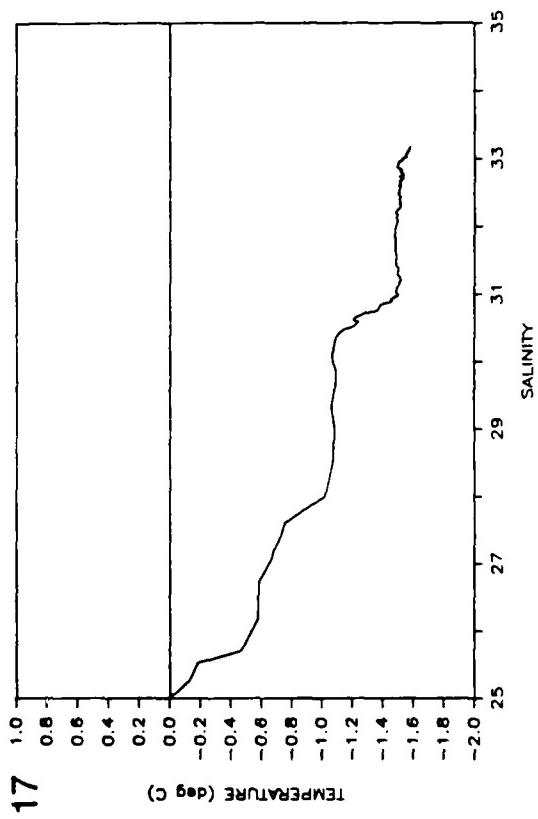
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14	XX		234	0820	Ship	70 30.1	136 48.7
15	XX		234	1150	Ship	70 21.2	137 59.3
16	X		234	1437	Ship	69 57.6	138 34.6



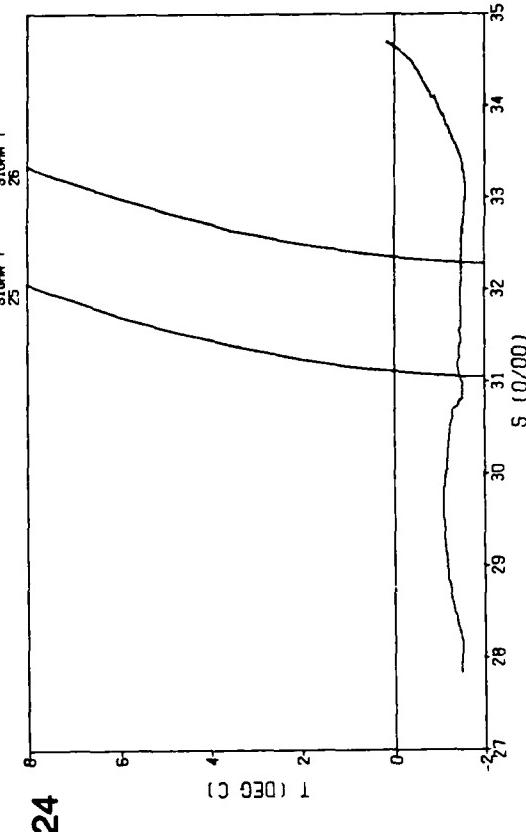
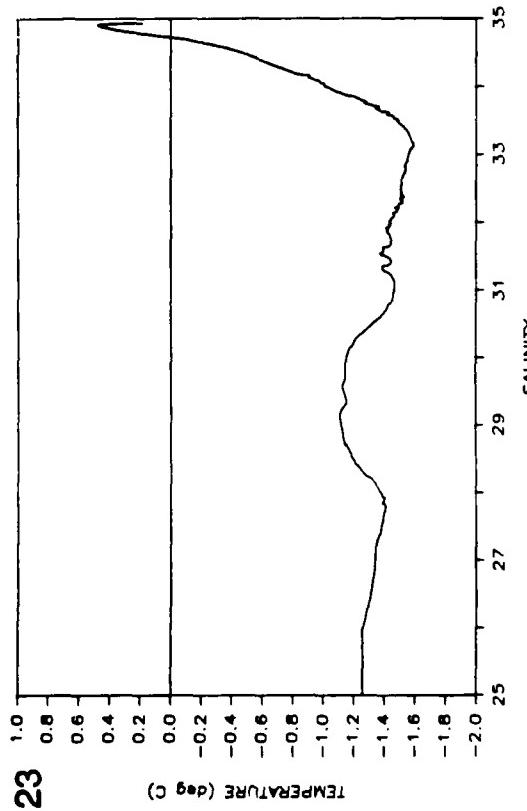
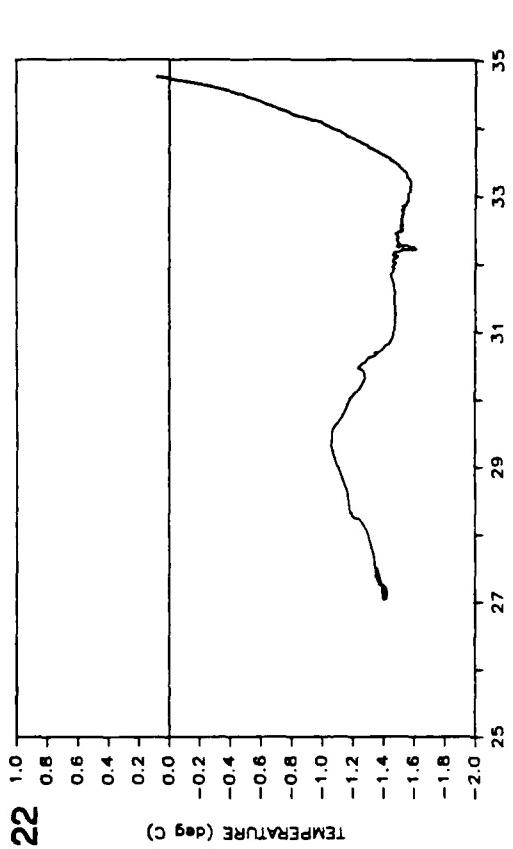
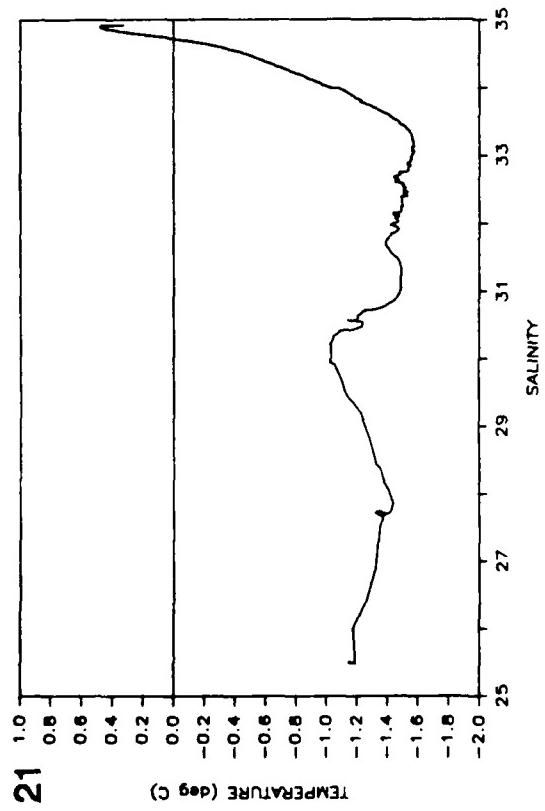
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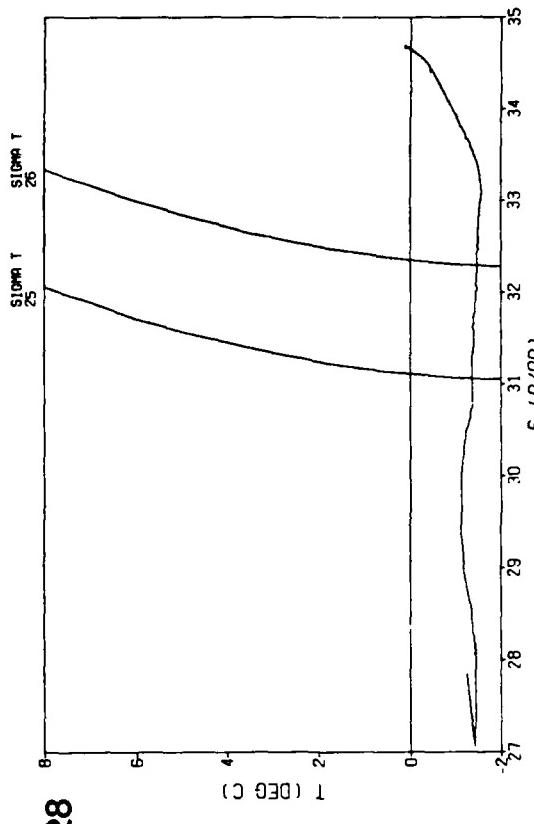
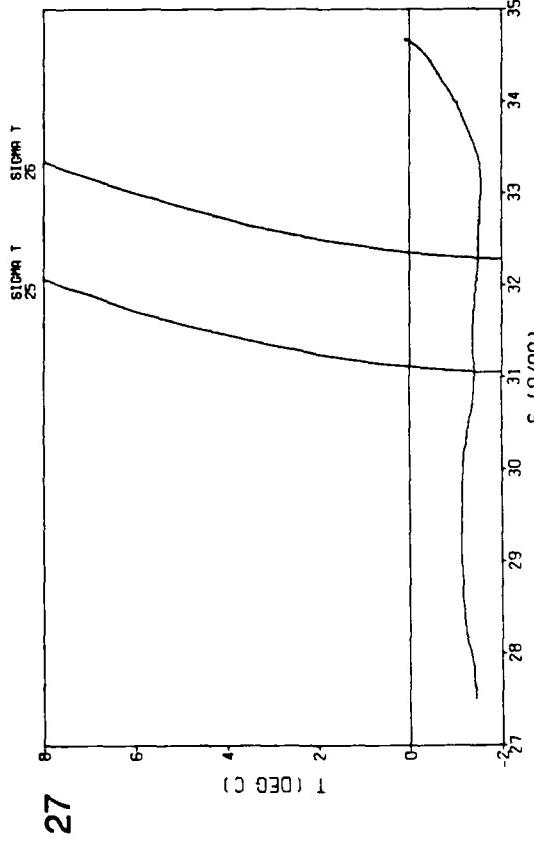
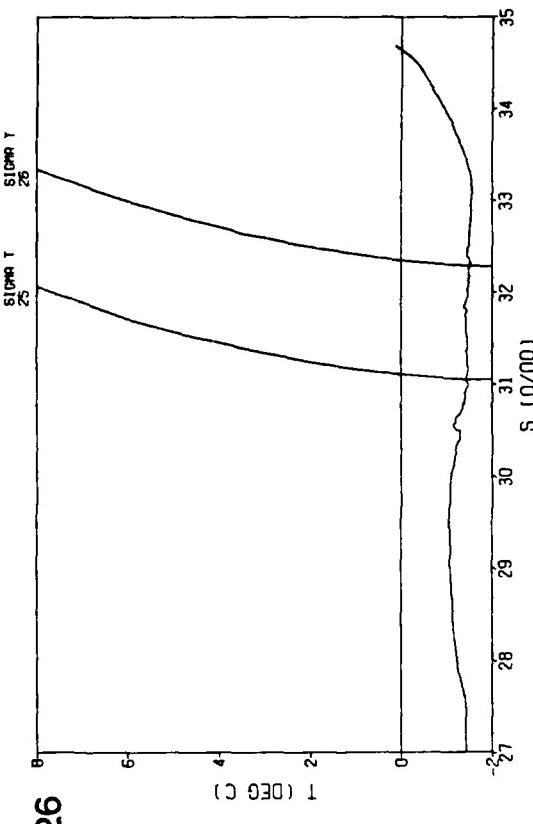
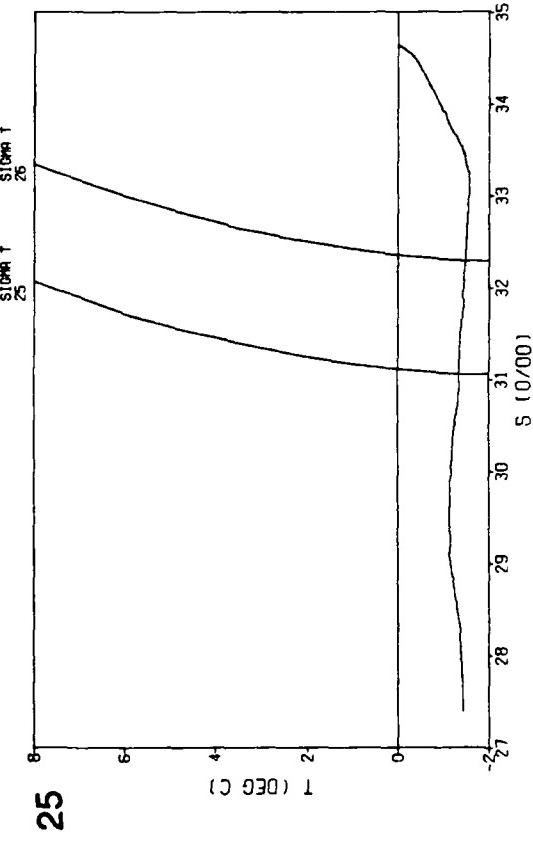
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
17	X		234	1810	Ship	70 13.9	140 4.6
18	X		234	2101	Ship	70 37.7	139 56.0
19	X		235	0240	Ship	71 11.9	140 0.8
20	X		235	1723	Ship	71 17.0	140 12.0



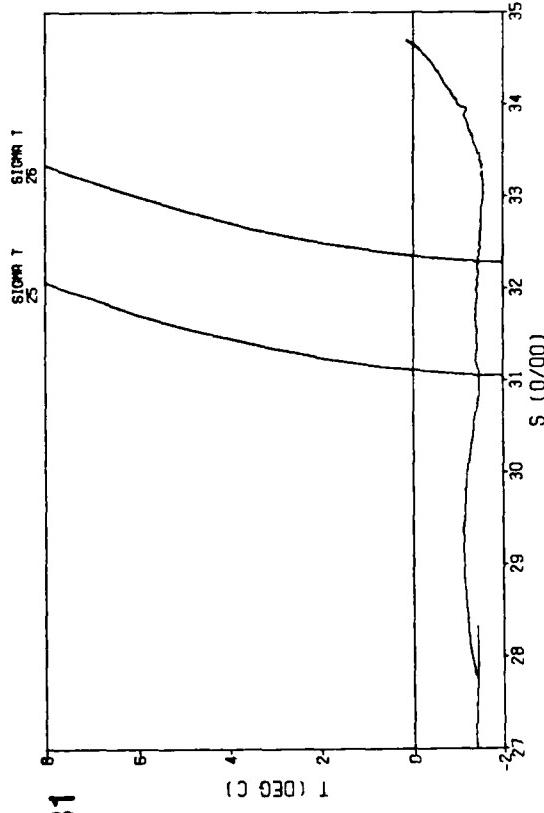
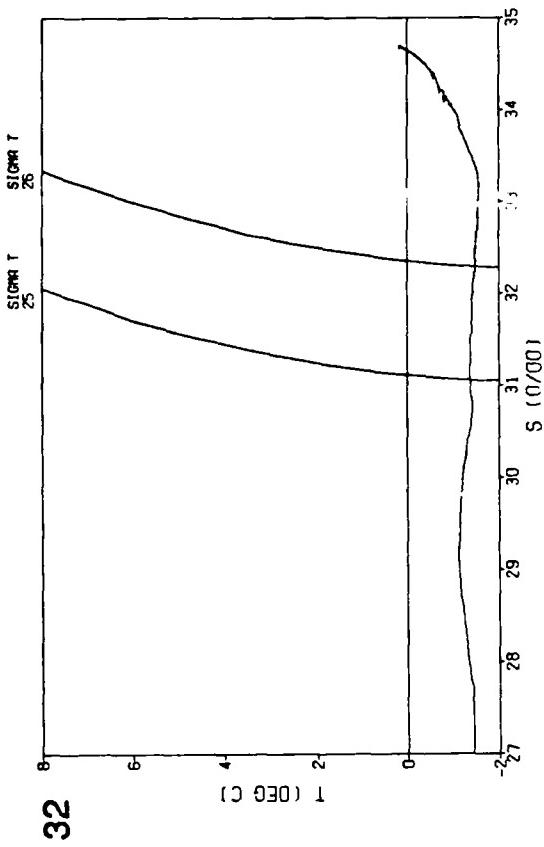
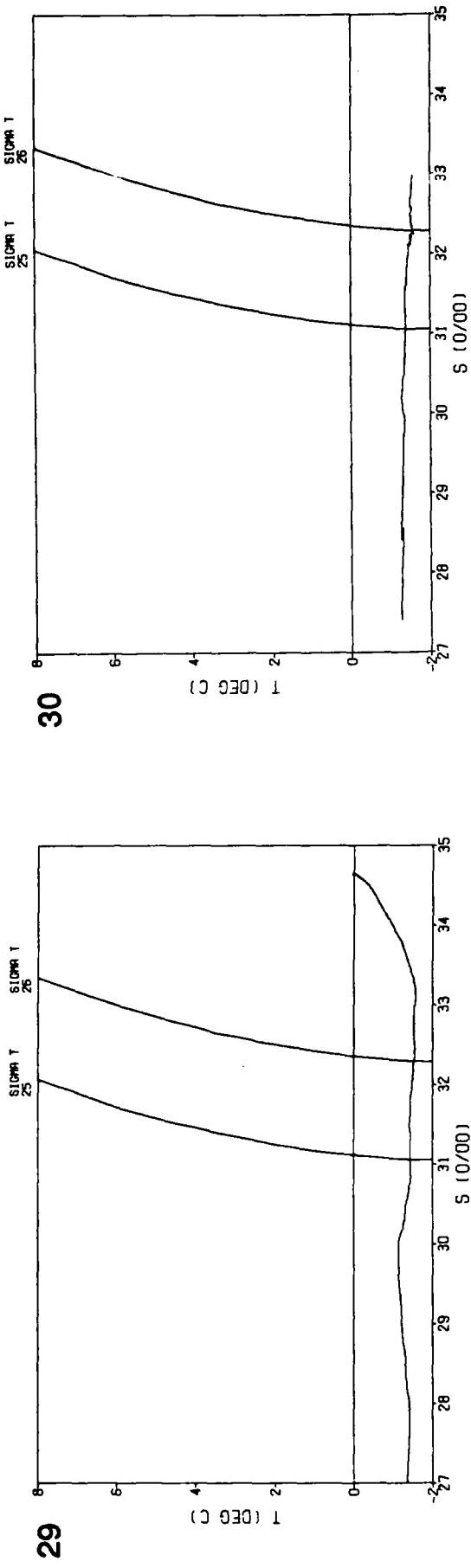
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22	X		236	1242	Ship	71 1.2	142 36.4
23	X		236	2321	Ship	70 54.8	143 35.1
24		X	236	1700	HeLo	71 42.9	134 15.0



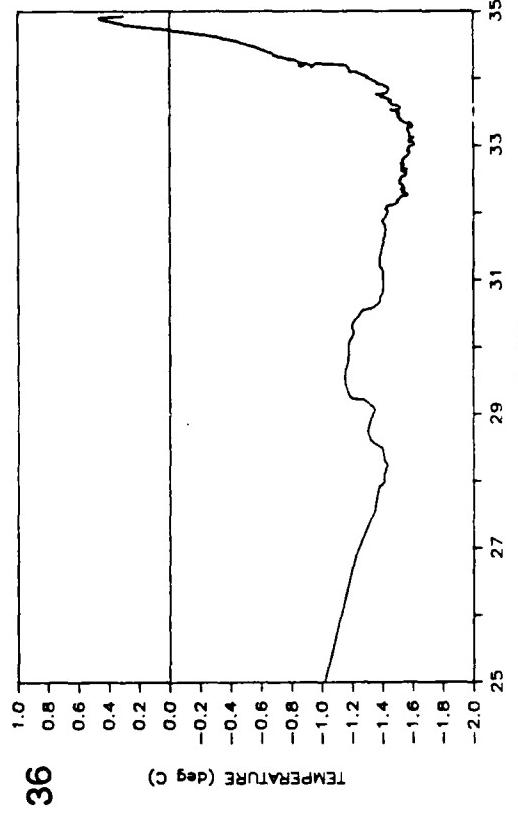
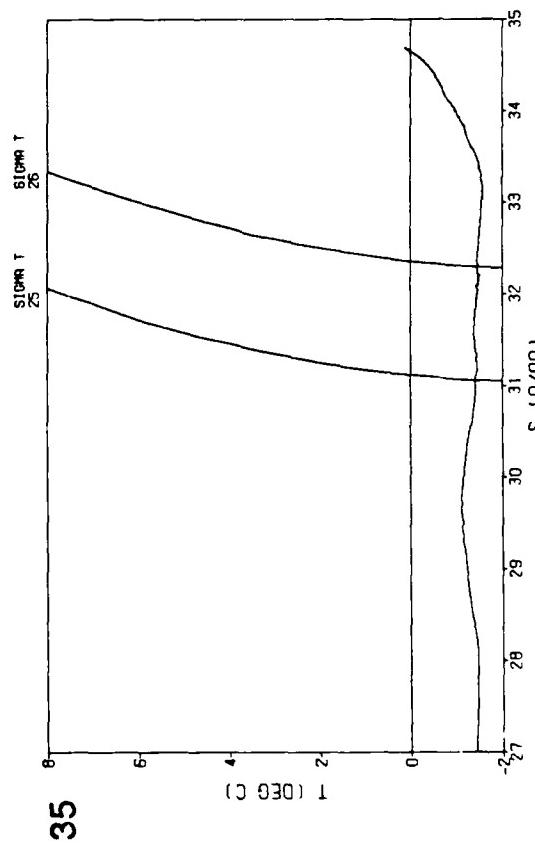
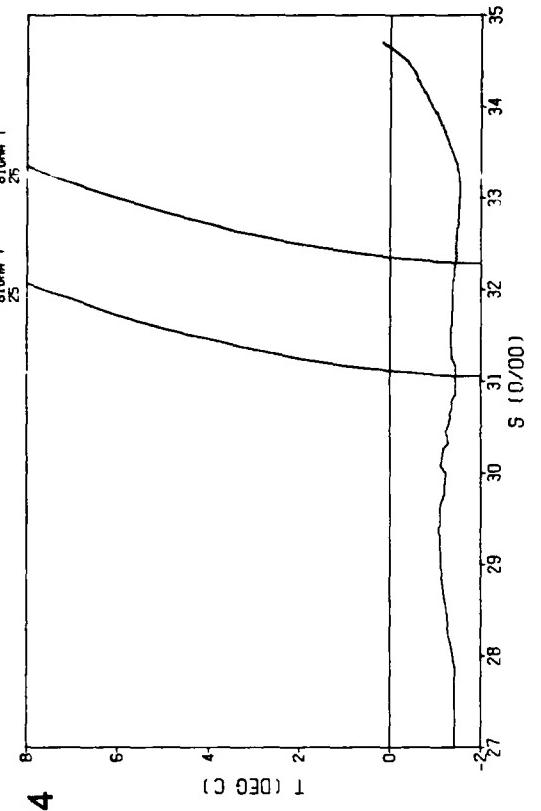
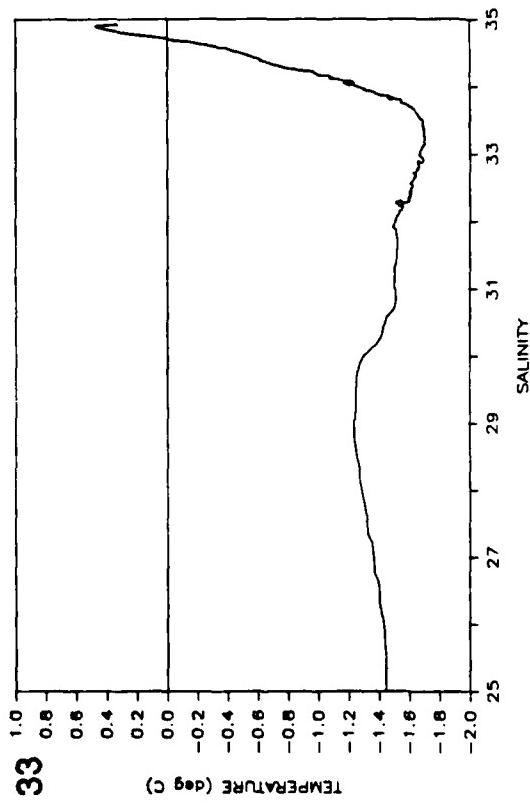
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27	X	X	236	2257	HeLo	71 10.2	143 36.0
28	X	X	236	2342	HeLo	71 35.0	143 35.3



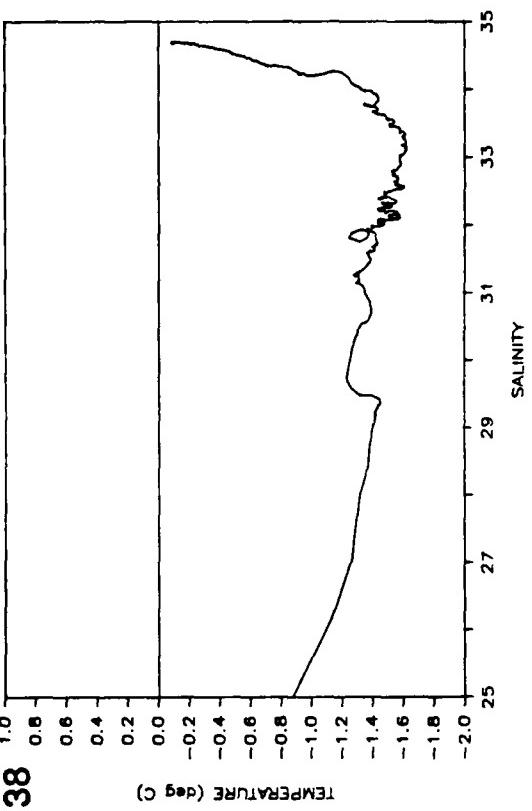
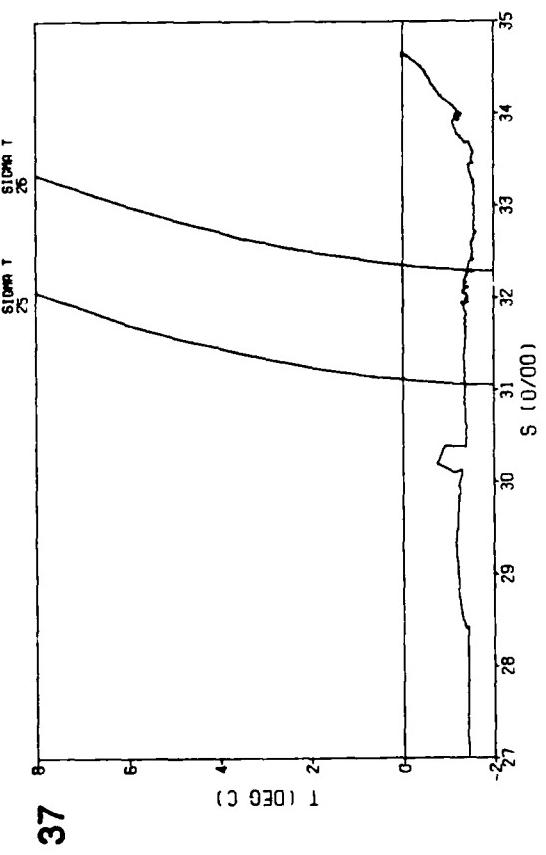
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30	X	X	237	0613	Ship	70 44.4	144 48.8
31	X	X	237	1043	Ship	71 8.7	145 15.9
32	X	X	237	1804	HeLo	71 13.3	144 45.0



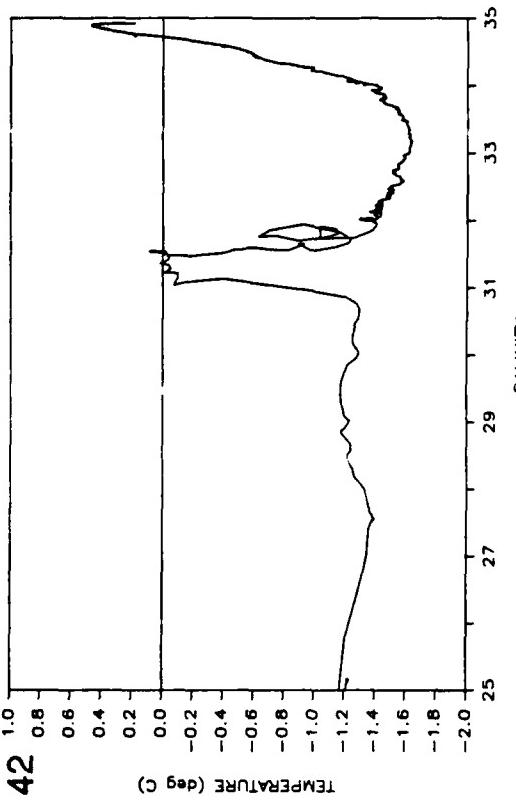
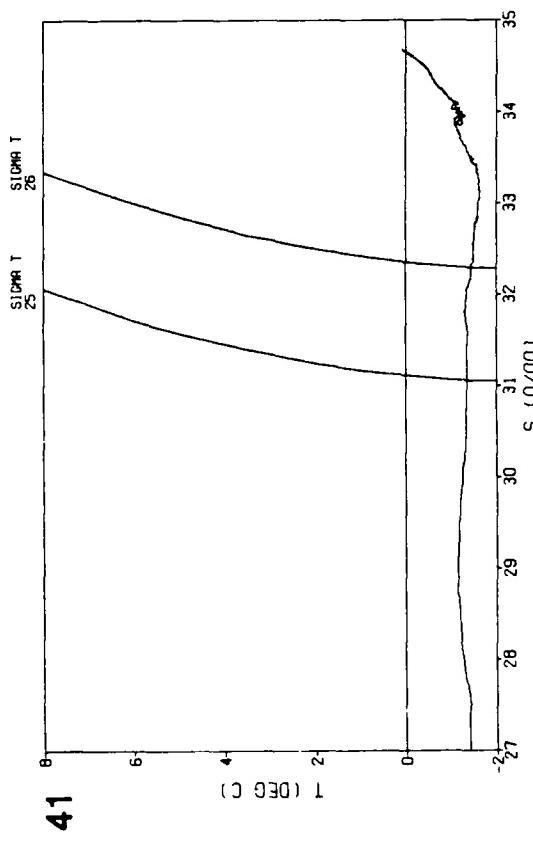
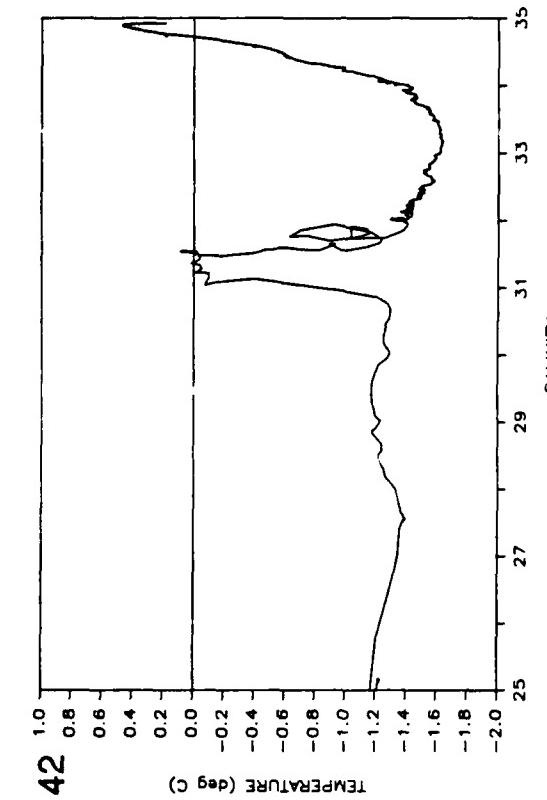
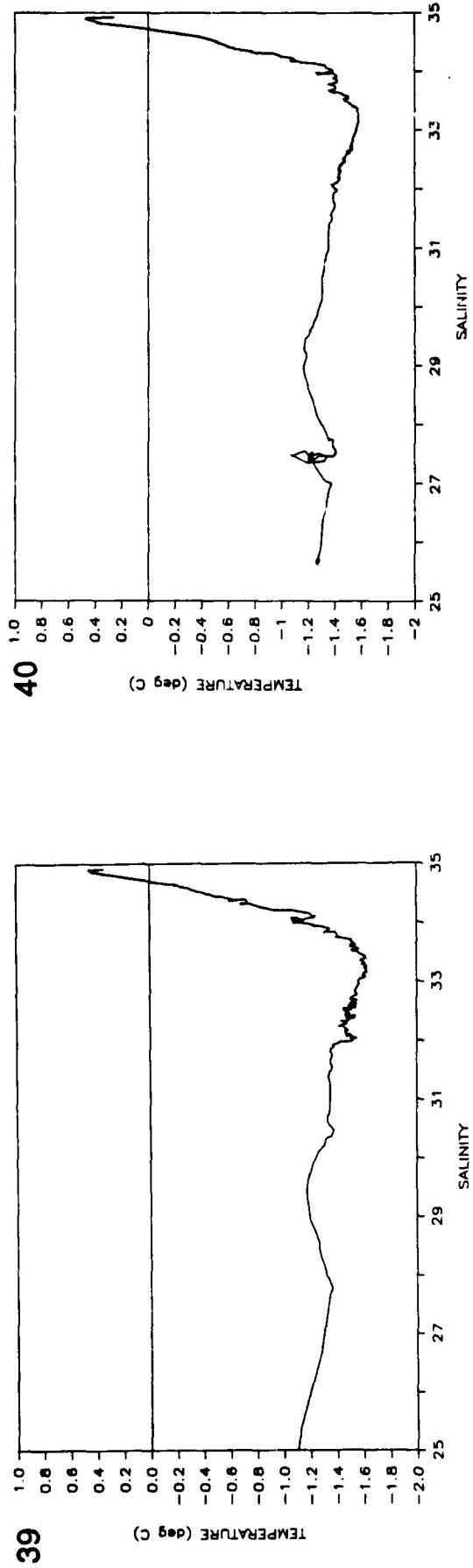
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33	X		237	1829	Ship	71 8.8	145 22.1
34		X	237	2221	HeLo	71 39.2	145 52.3
35		X	237	2253	HeLo	71 54.2	145 52.0
36	X		238	0425	Ship	71 8.1	146 29.8



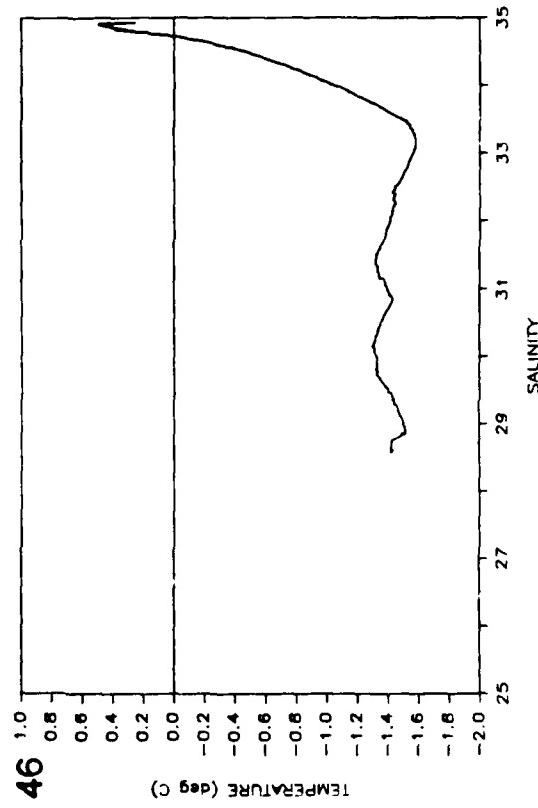
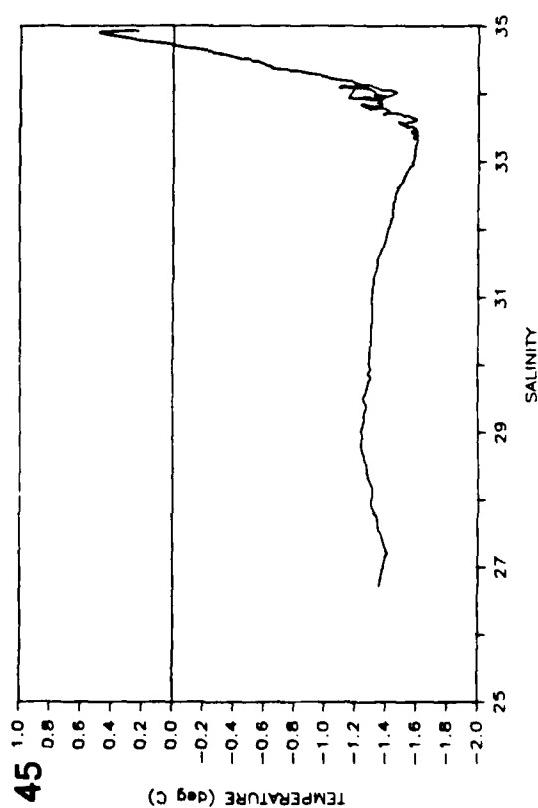
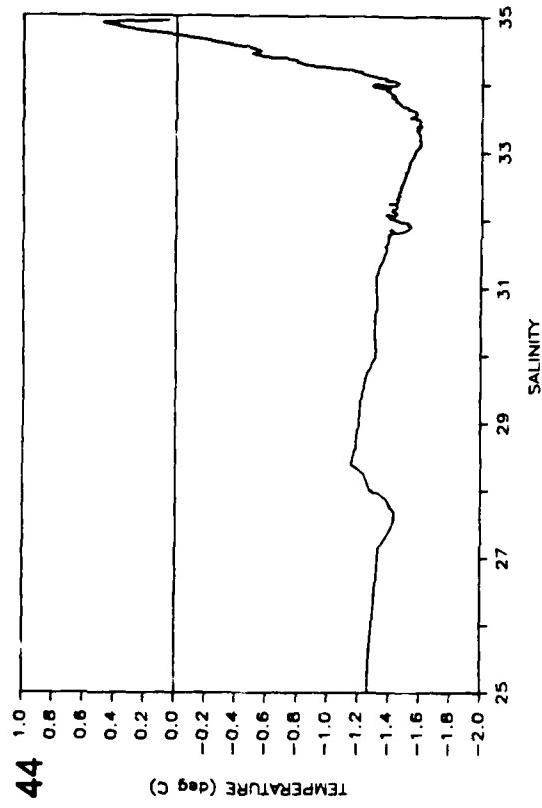
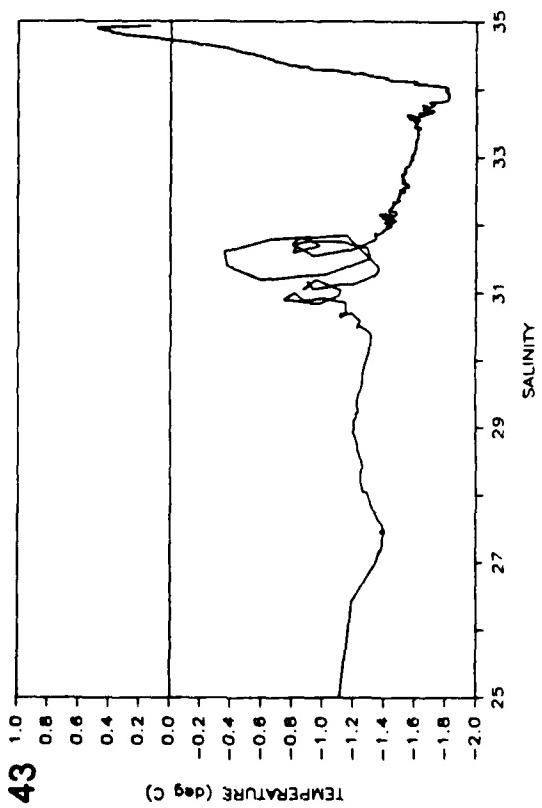
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38			240	0509	Ship	71 15.5	149 6.7



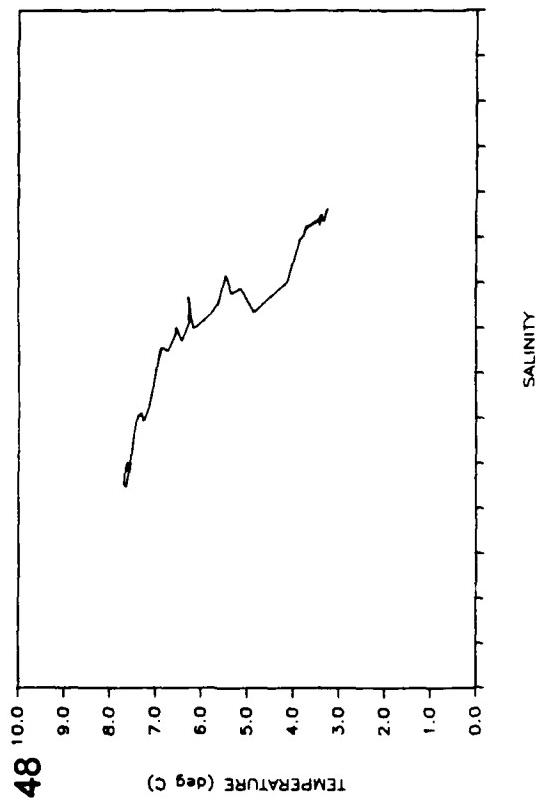
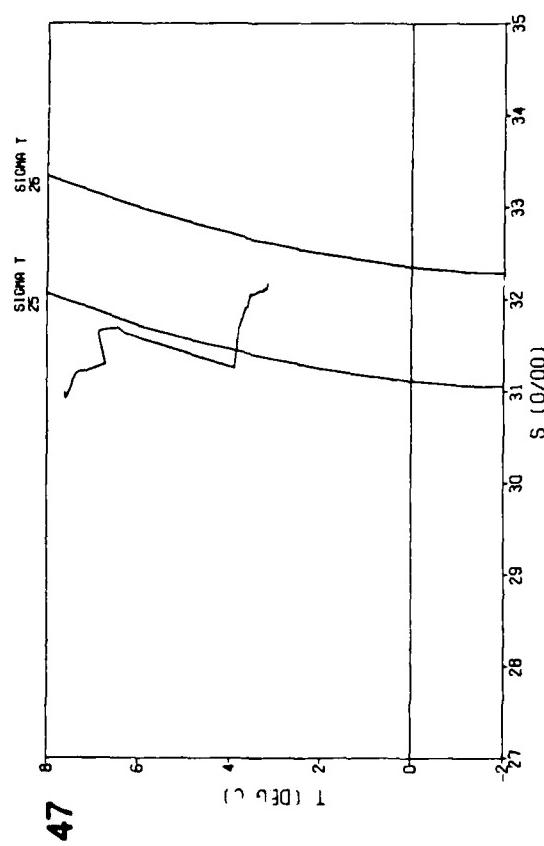
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40	X		240	1803	Ship	71 42.9	150 2.4
41		X	240	1816	Ship	71 42.9	149 16.5
42	X		241	0144	Ship	71 57.9	149 58.5



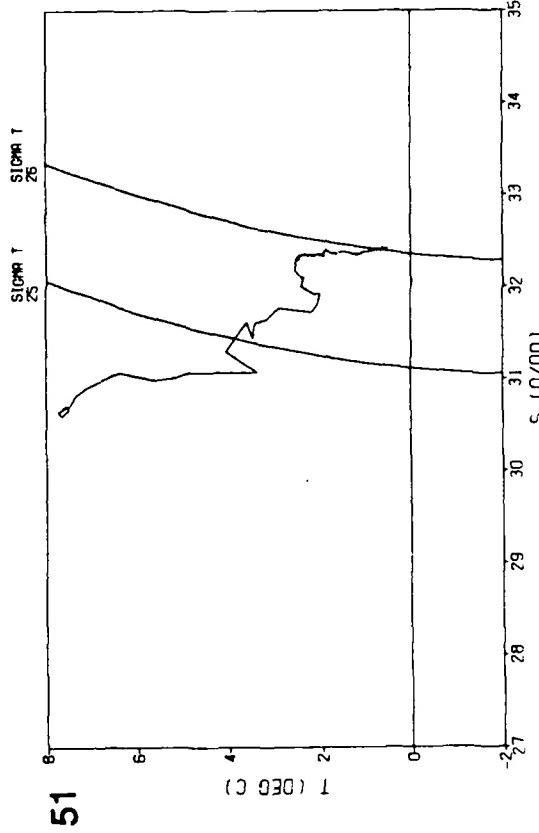
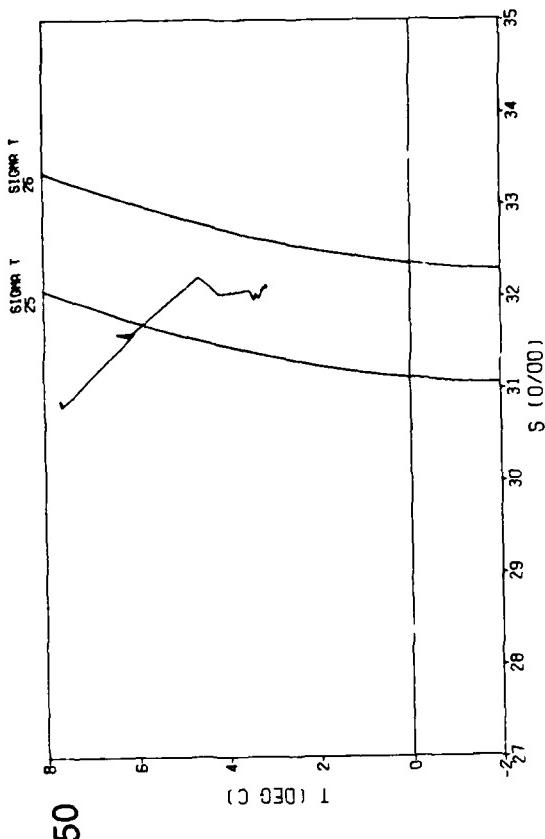
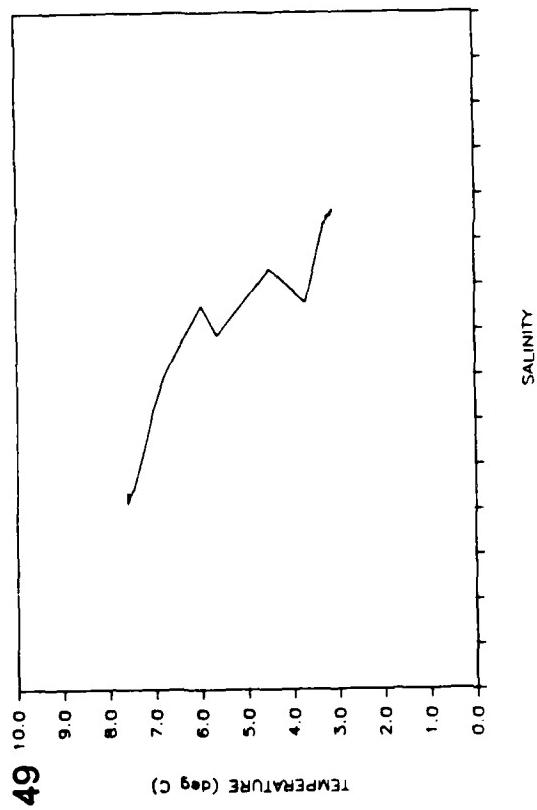
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43	X		241	0548	Ship	72° 9'.8"	150° 1'.7"
44	X		241	1101	Ship	72° 24'.9"	150° 39'.9"
45	X		241	1636	Ship	72° 41'.5"	151° 13'.9"
46	X		242	0200	Ship	73° 8'.6"	151° 23'.0"



Station Number	ASL Cast	APL Cast	Julian Day	GMT hour	Platform	Latitude	Longitude
47	X	X	245	0524	Ship	70 50.7	160 34.9
48	X						



Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
49	X		245	0626	Ship	70 55.8	160 10.8
50		X	245	0819	Ship	71 2.2	159 39.1
51		X					
52	X						



SALINITY

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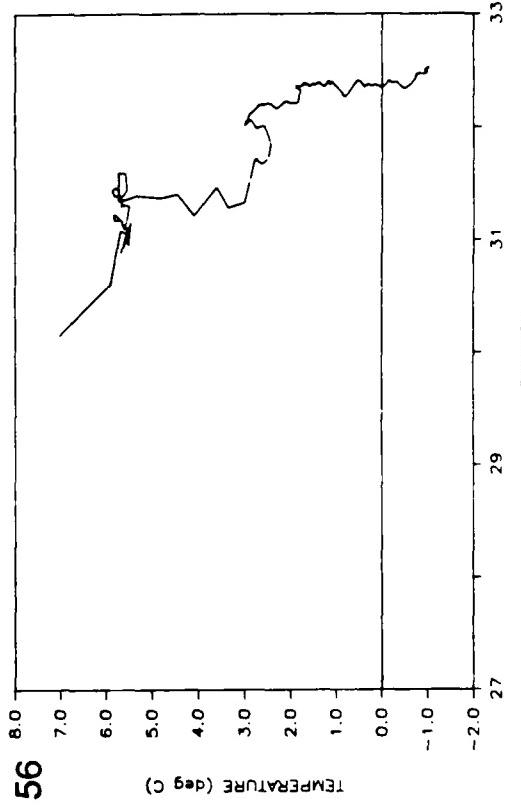
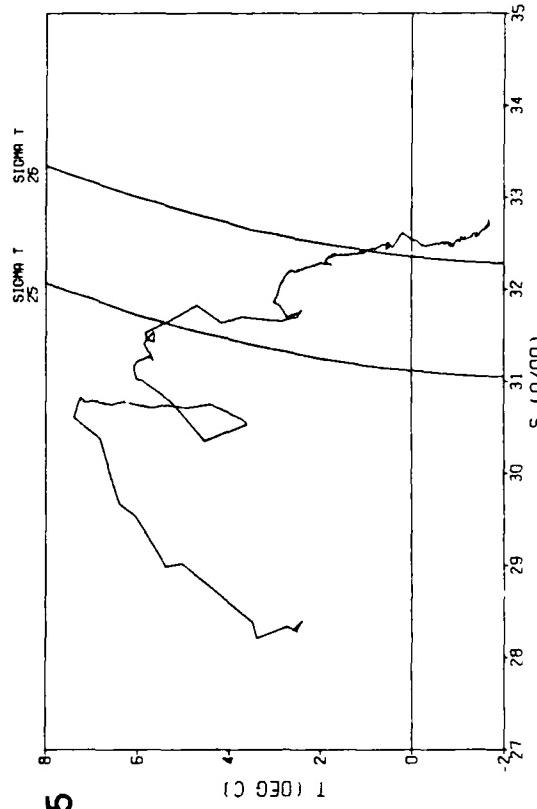
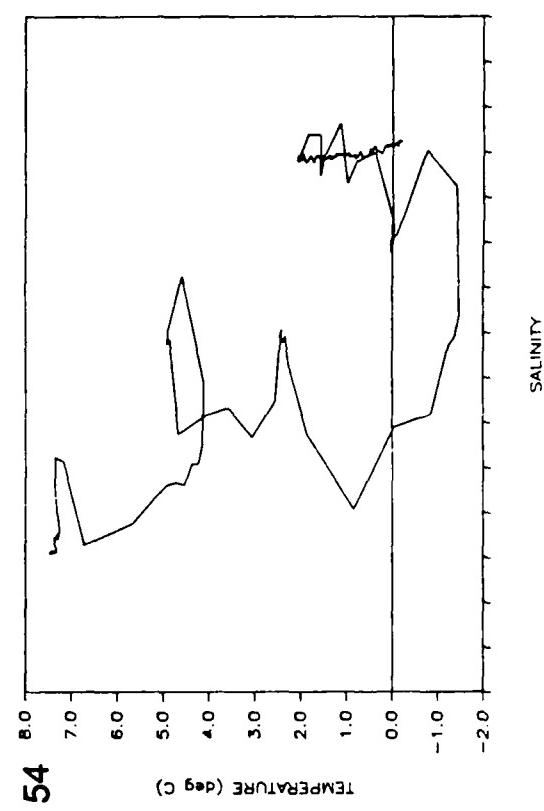
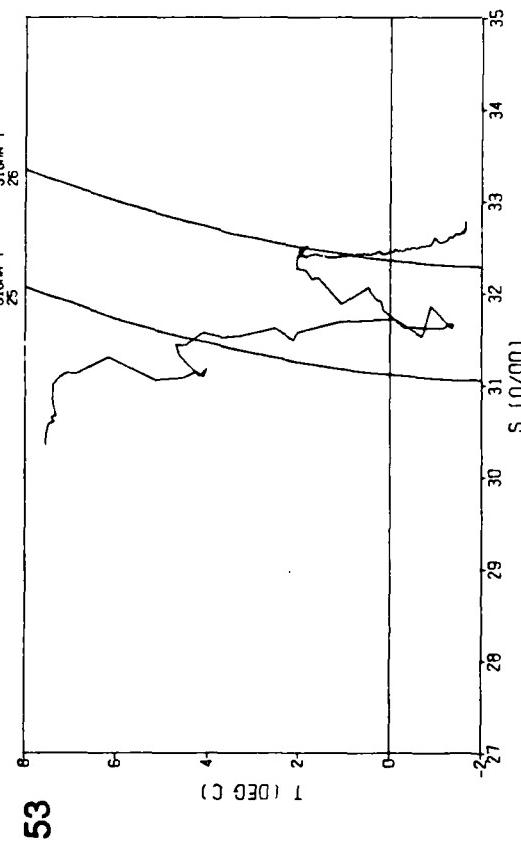
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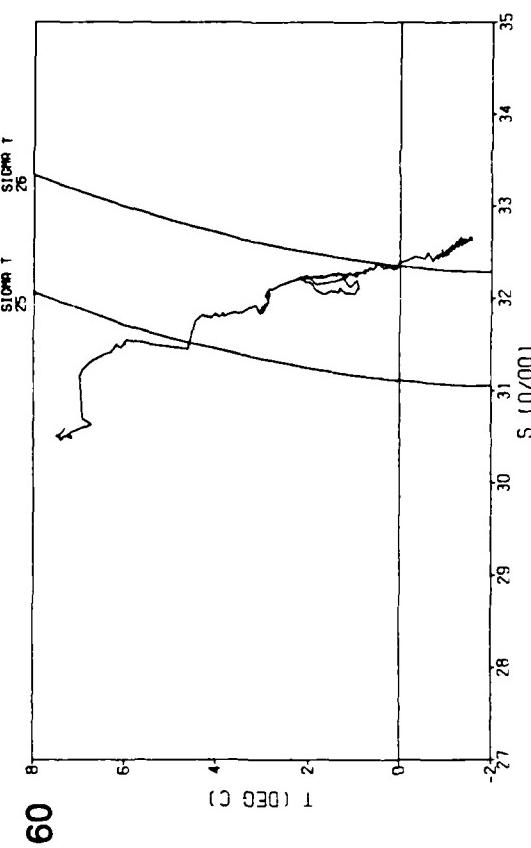
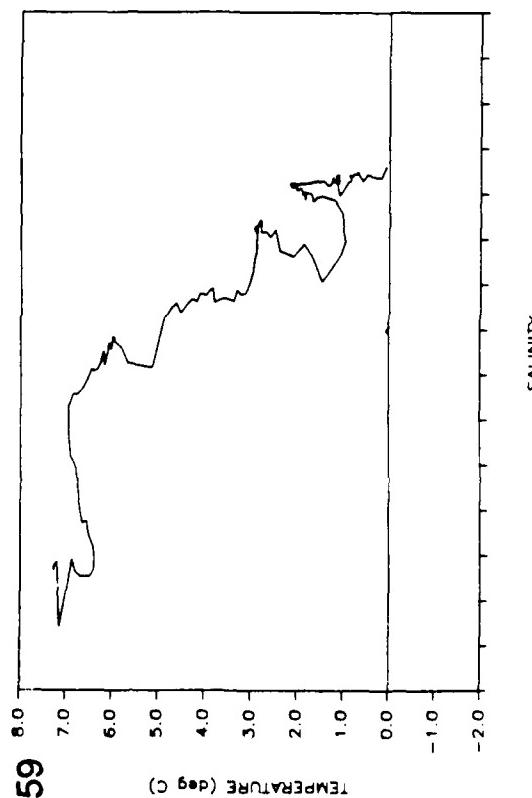
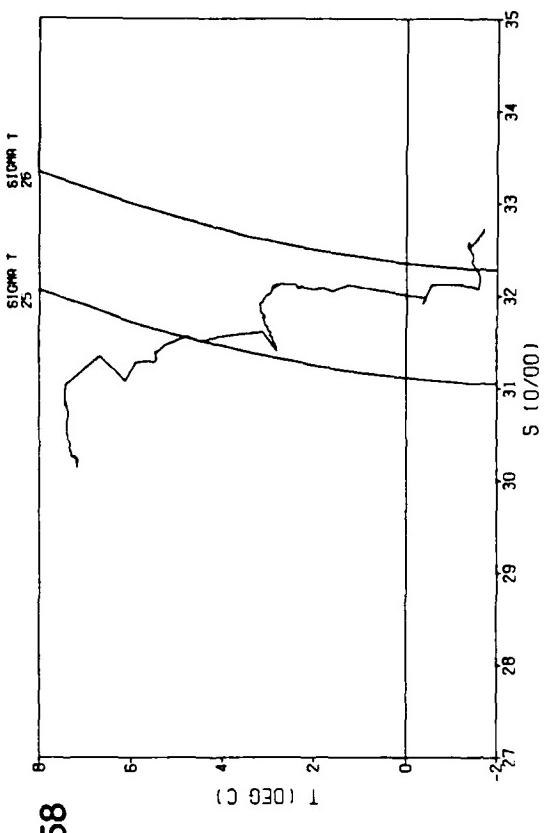
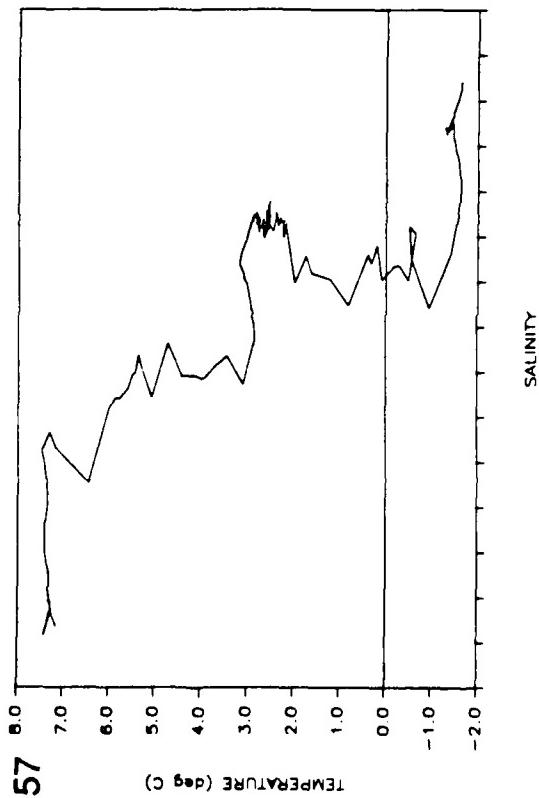
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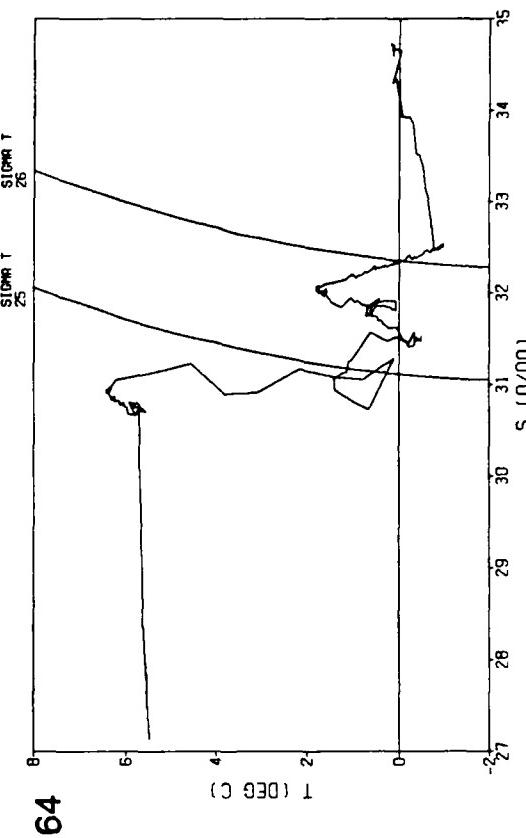
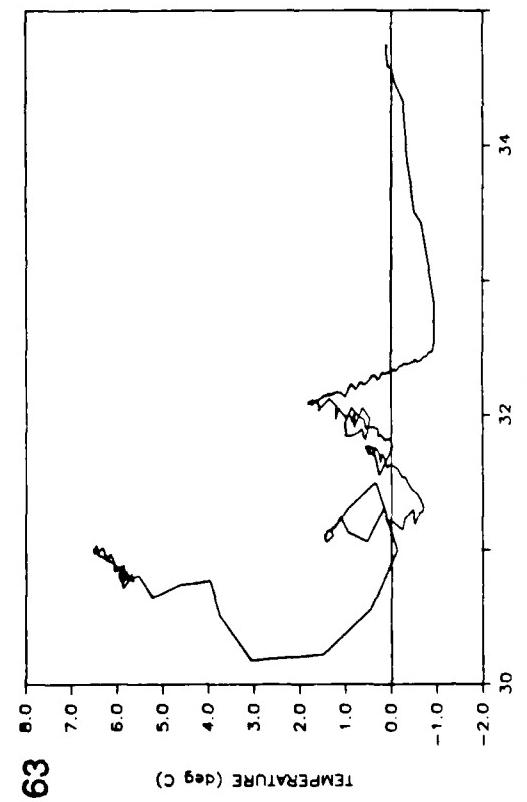
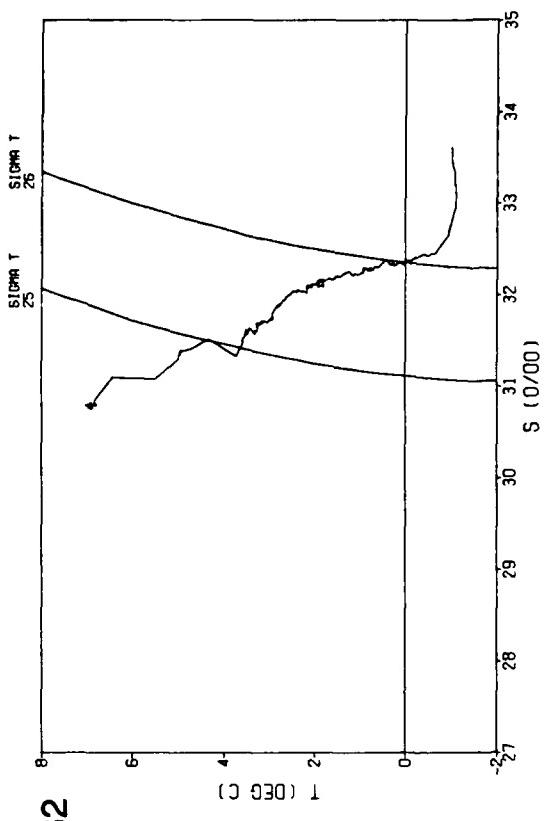
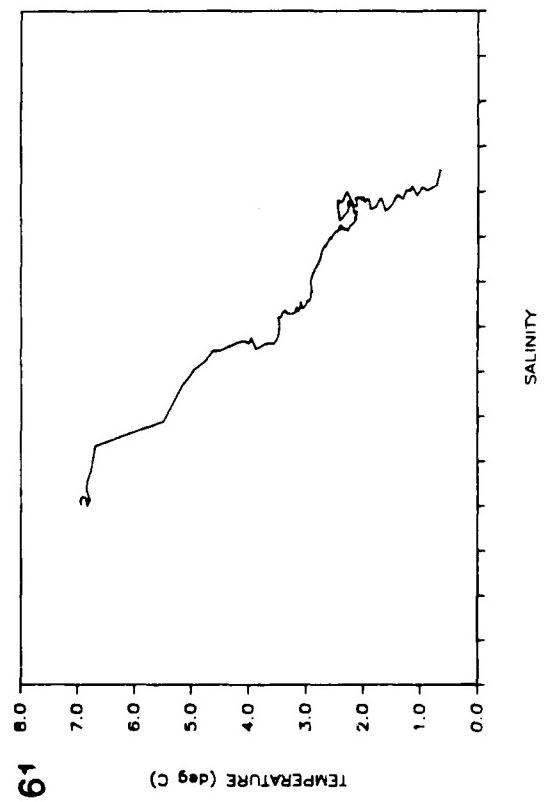
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55	X						
56	X						



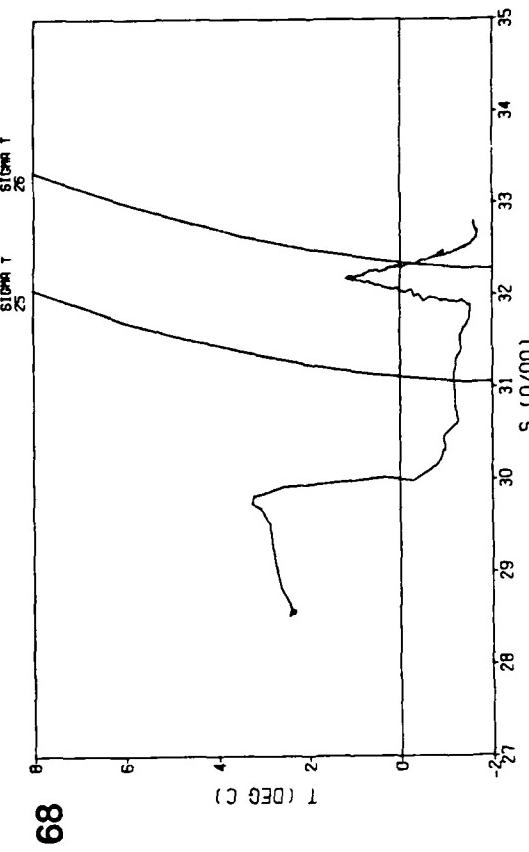
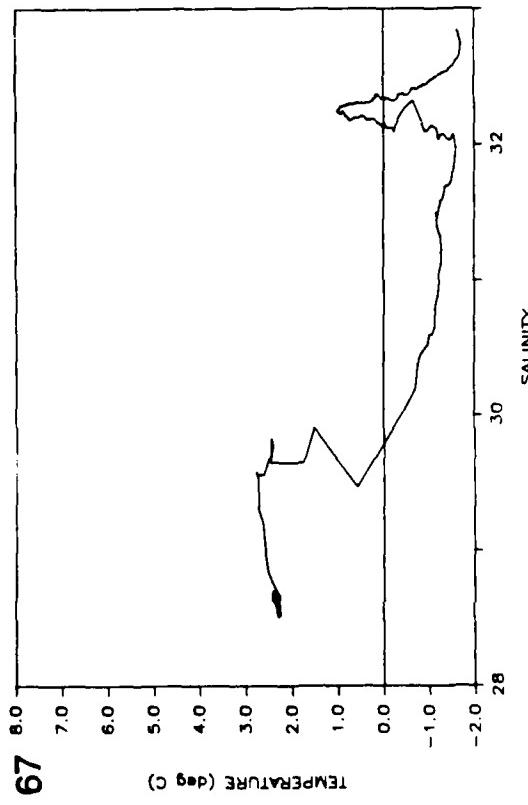
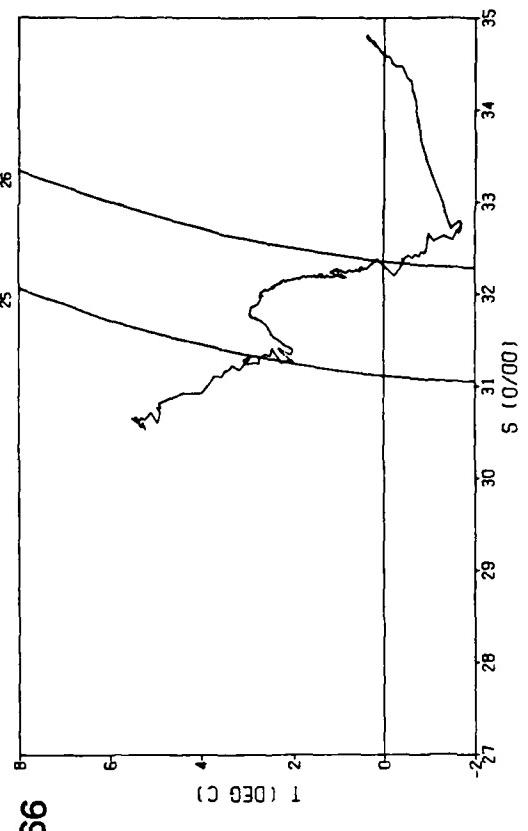
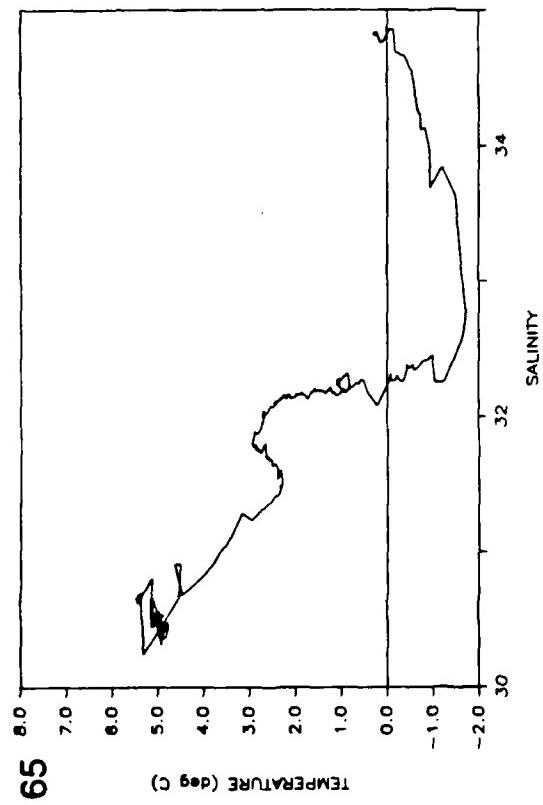
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58	X	X	245	1300	Ship	71 21.4	157 55.2
59							
60							



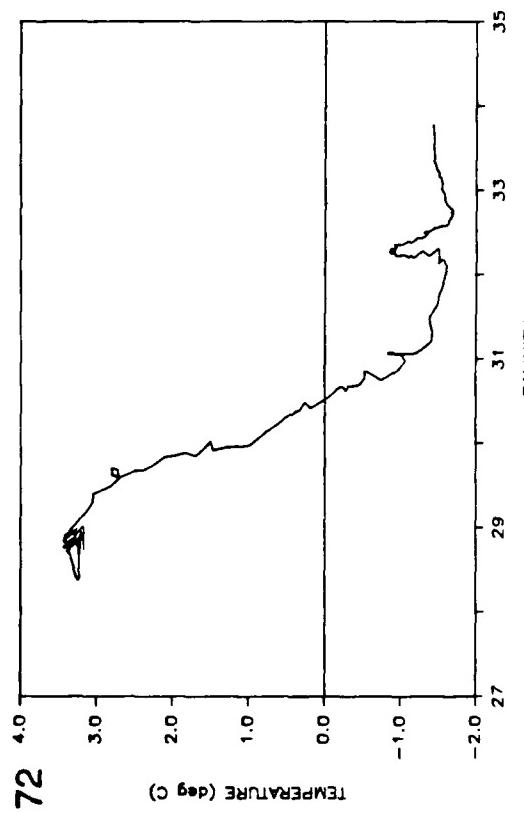
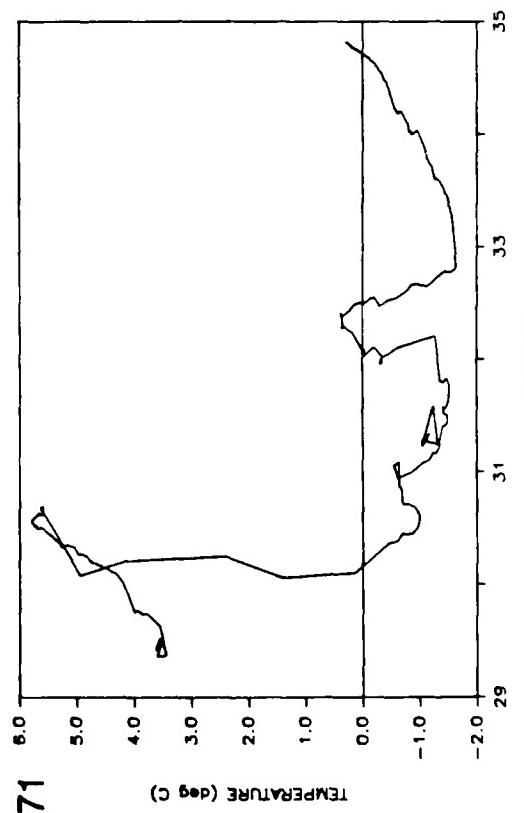
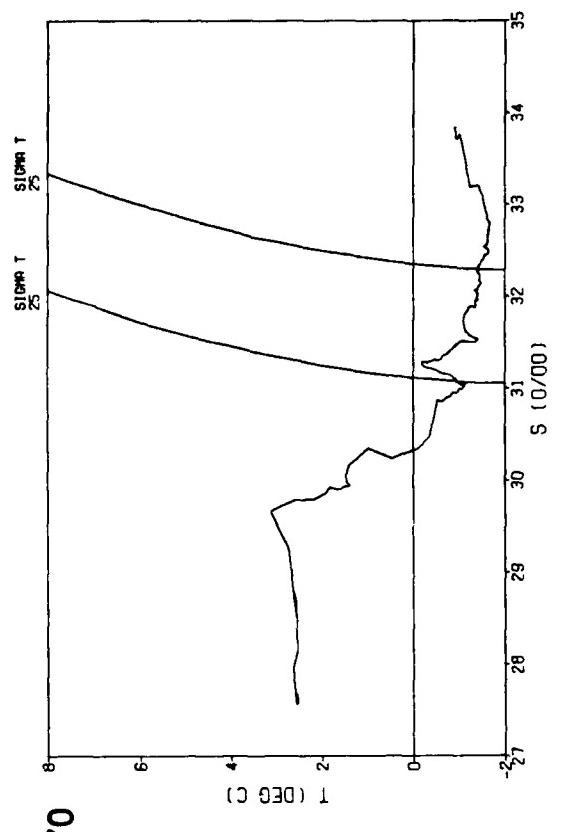
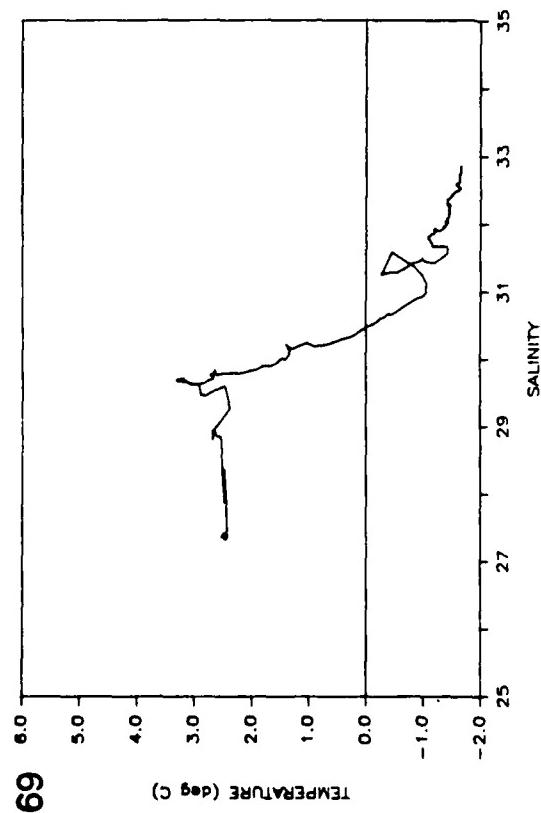
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62	X	X	245	1530	Ship	71 28.7	157 5.3
63							
64							



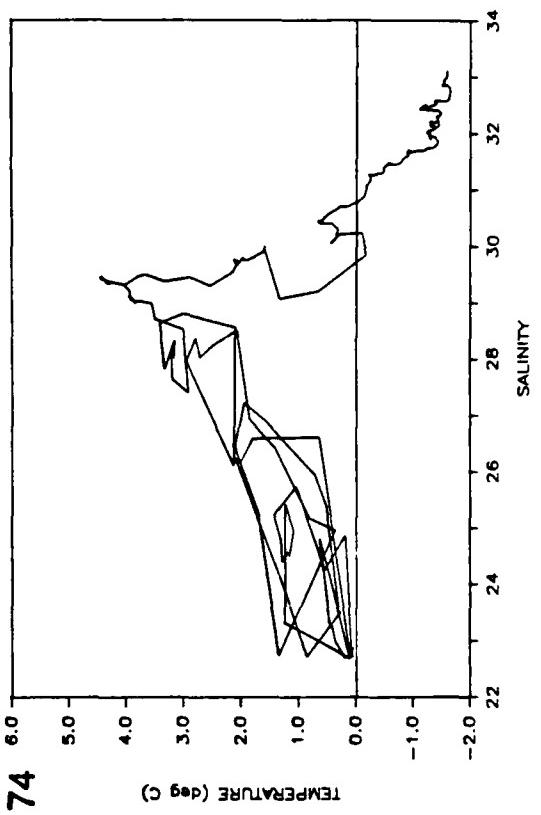
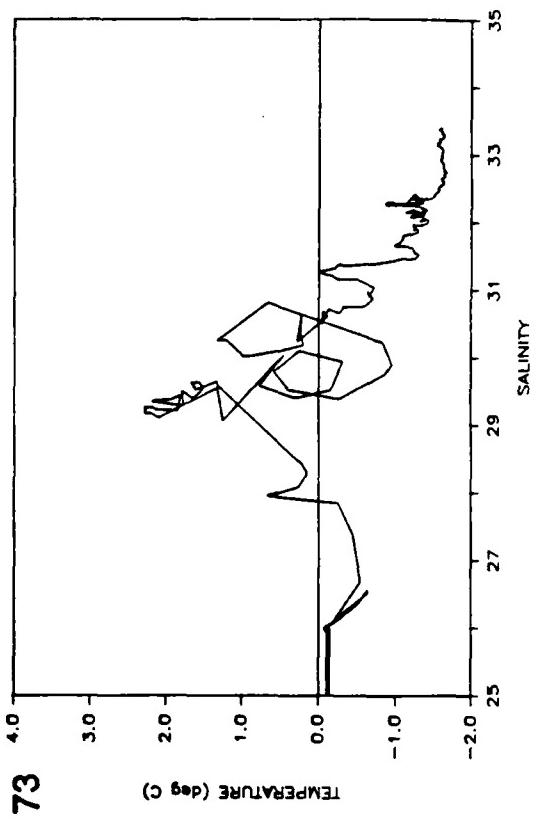
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
65	X	X	245	1659	Ship	71 32.5	156 36.9
66	X	X	245	1831	Ship	71 36.7	156 8.3
67	X	X					
68							



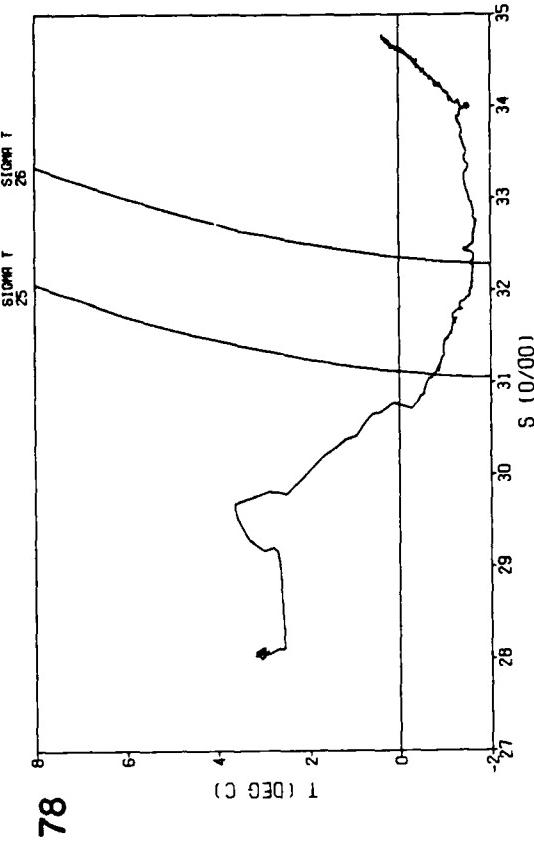
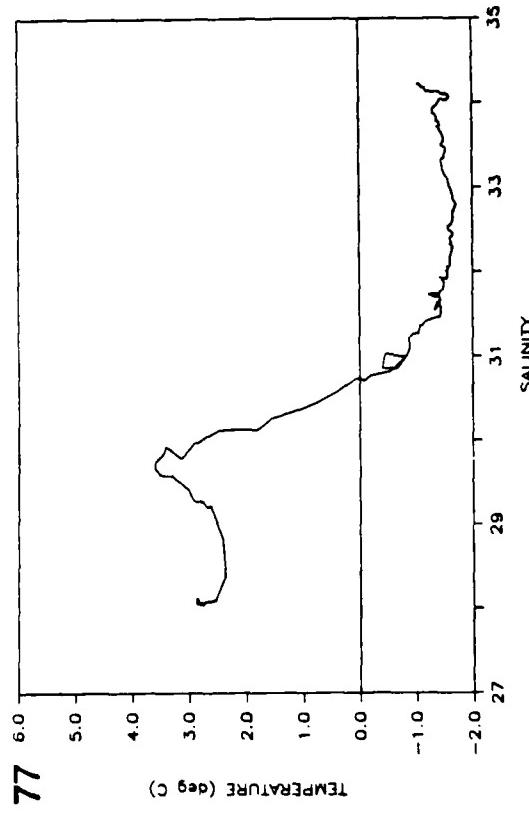
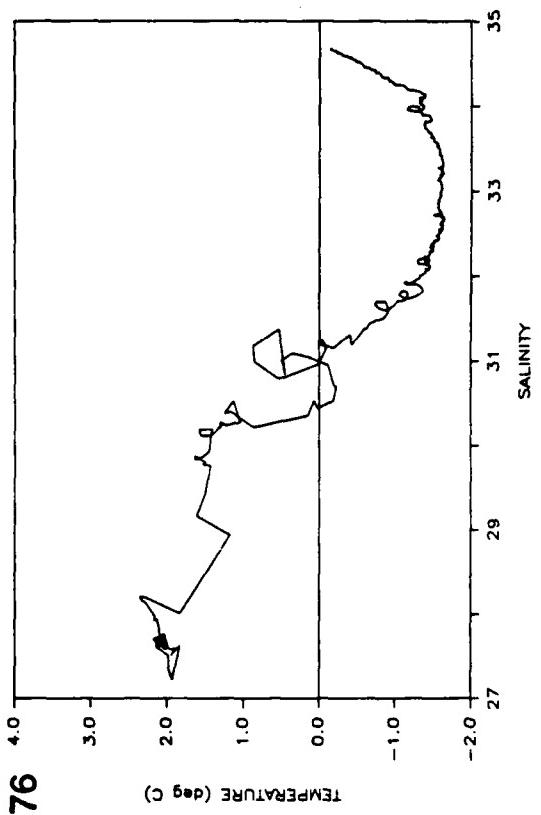
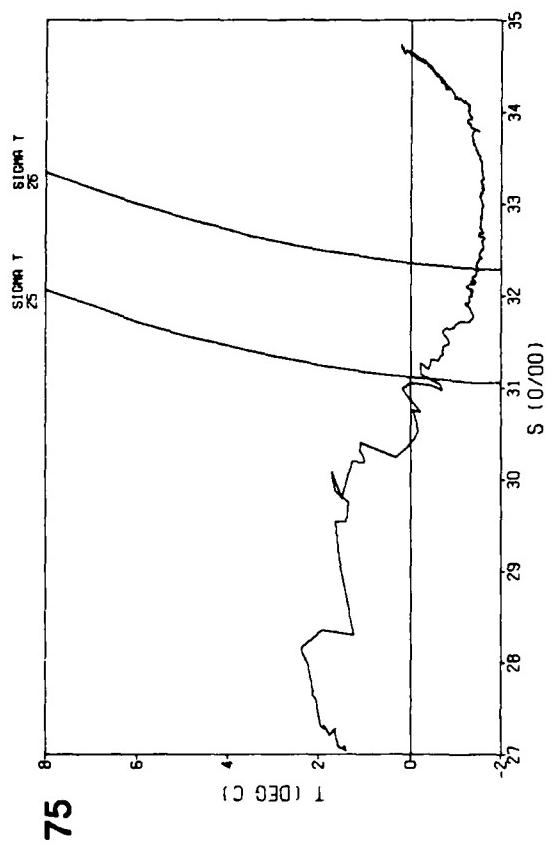
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69	X	X	245	2000	Ship	71 41.3	155 35.9
70	X	X	245	2121	Ship	71 44.4	155 8.5
71	X	X	245	2351	Ship	71 55.6	155 1.3
72							



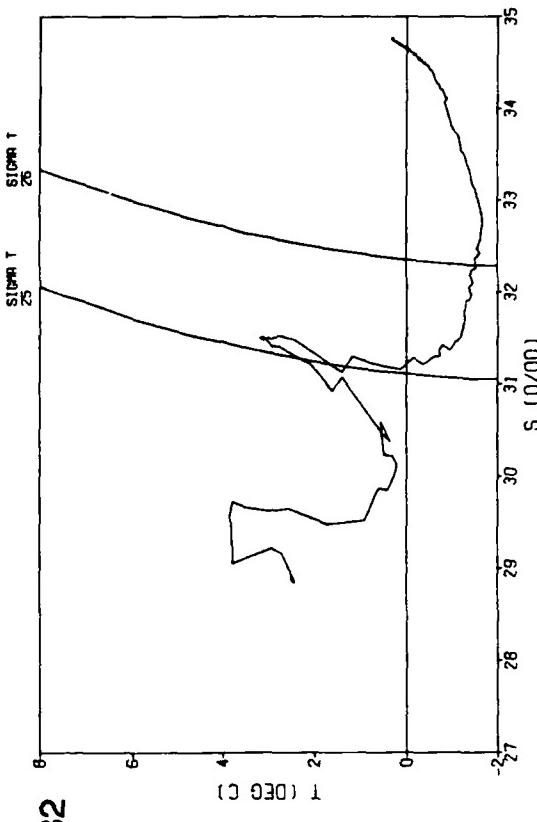
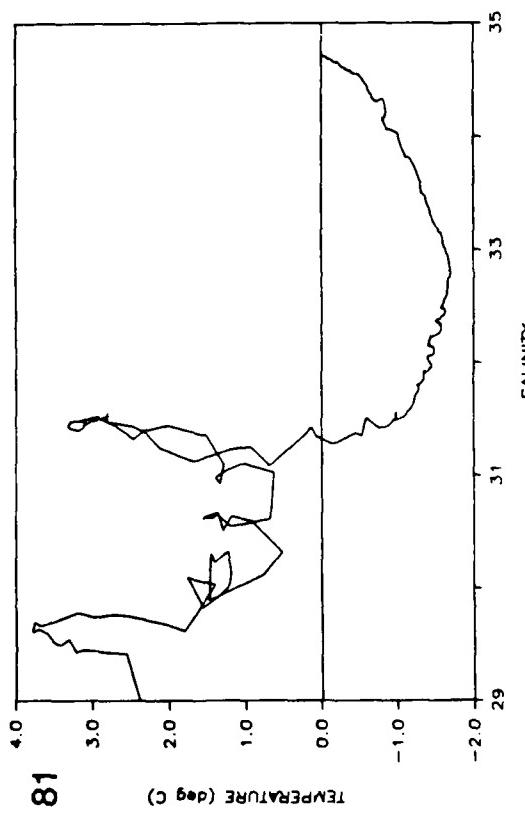
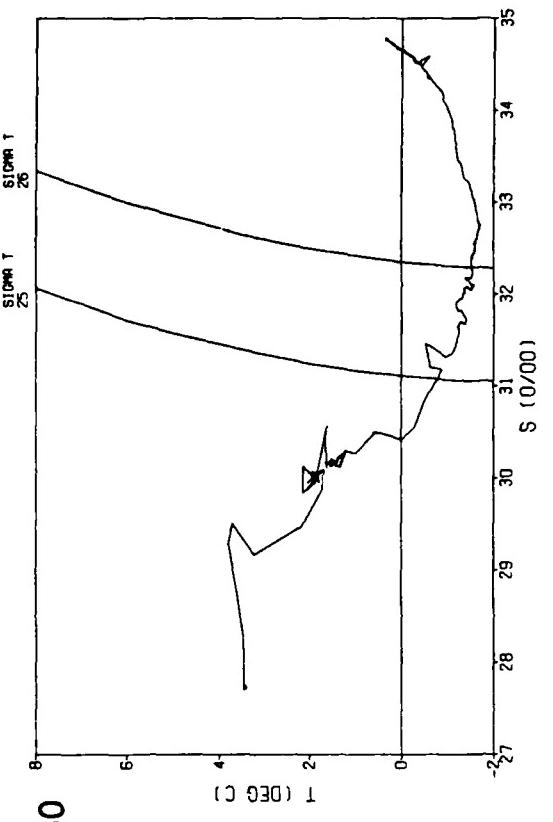
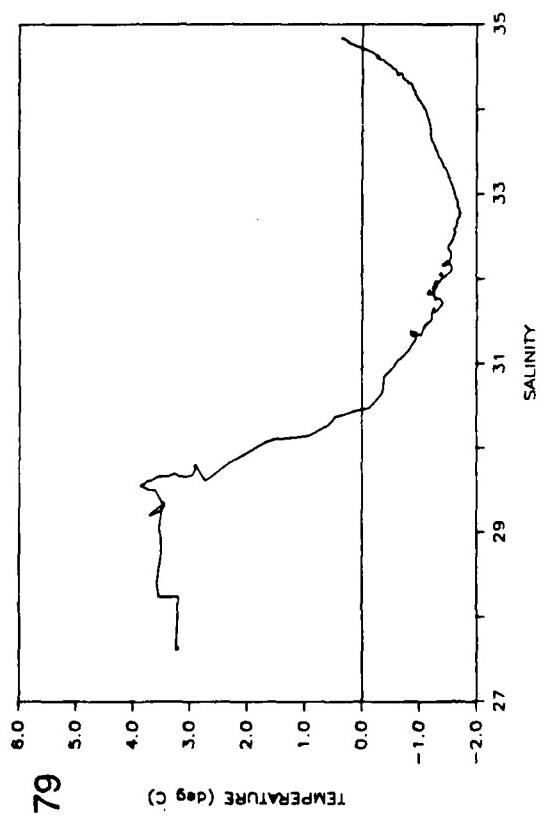
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
73	X		246	0109	Ship	72 3.9	154 53.9
74	X		246	0254	Ship	72 13.5	154 48.1



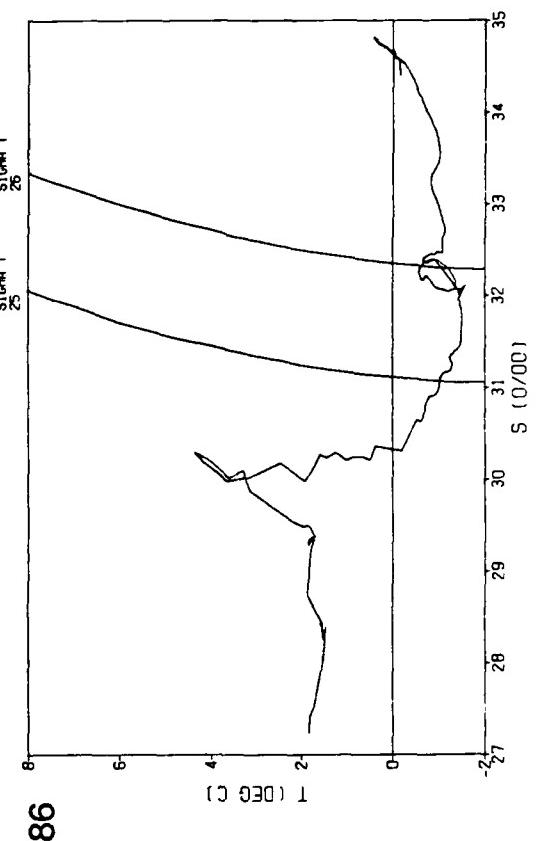
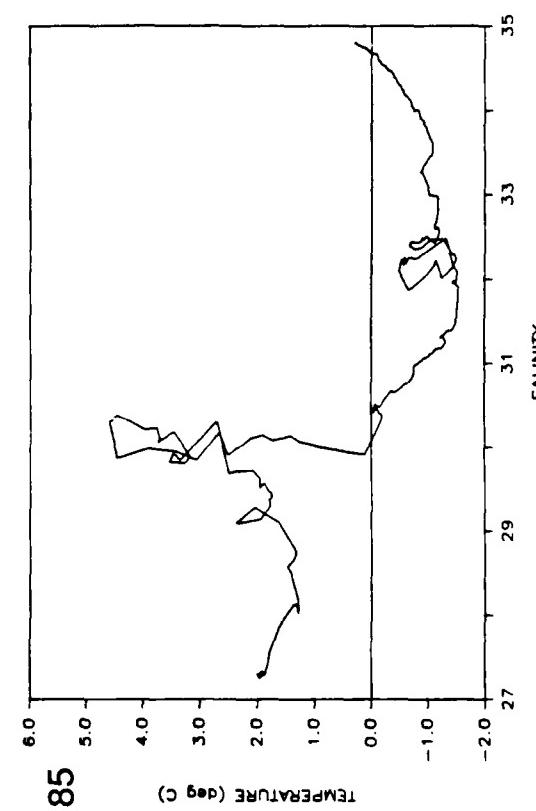
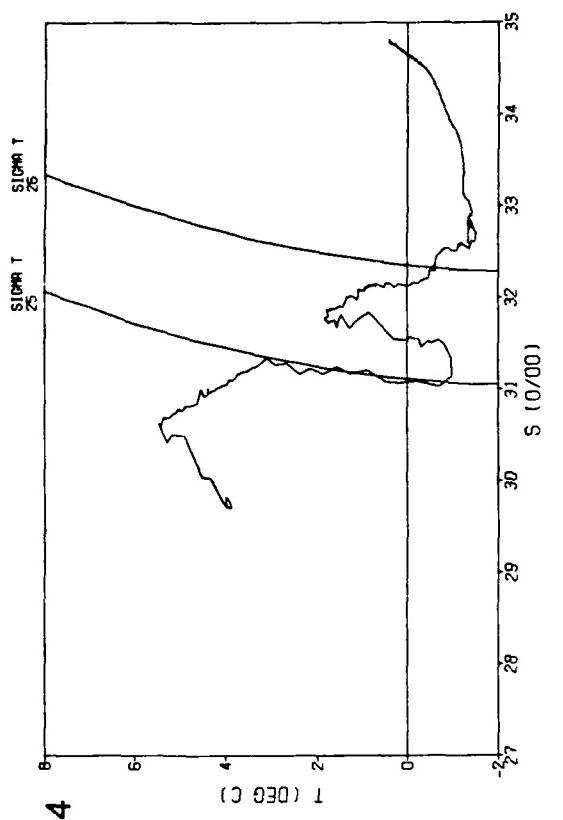
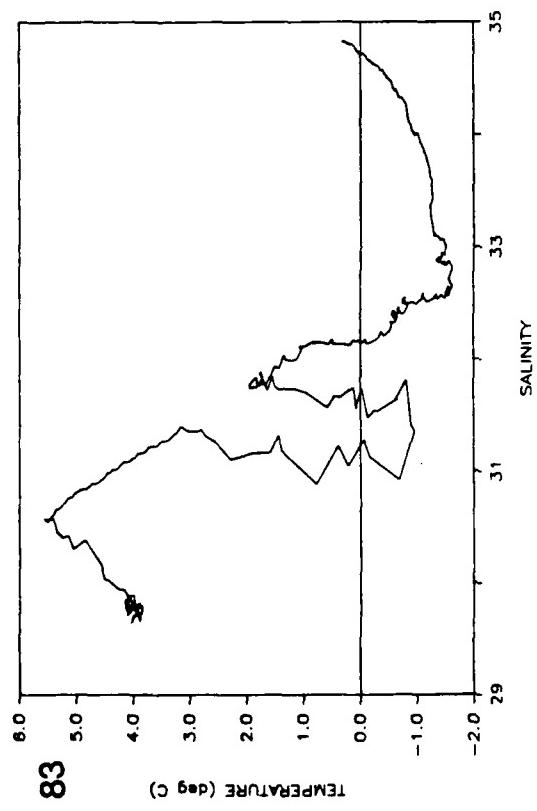
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75	X	X	246	0531	Ship	72 4.1	155 36.6
76	X	X	246	0650	Ship	72 1.9	155 29.6
78	X	X					



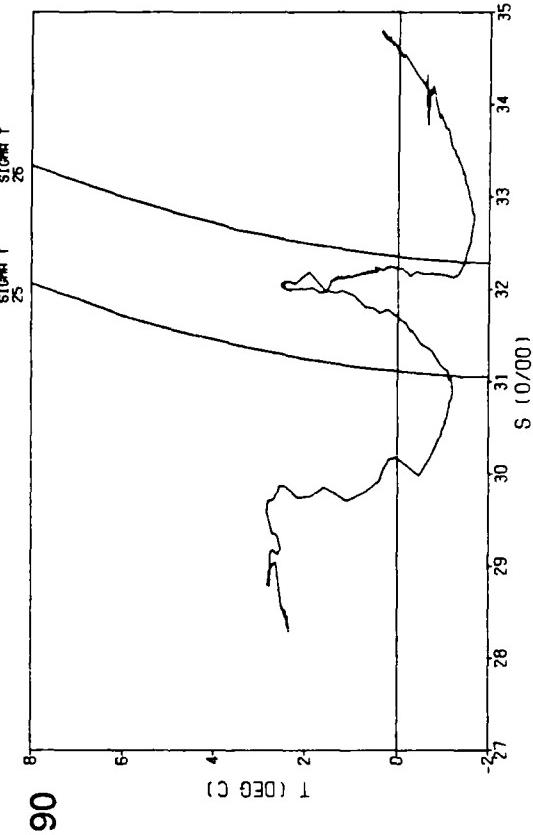
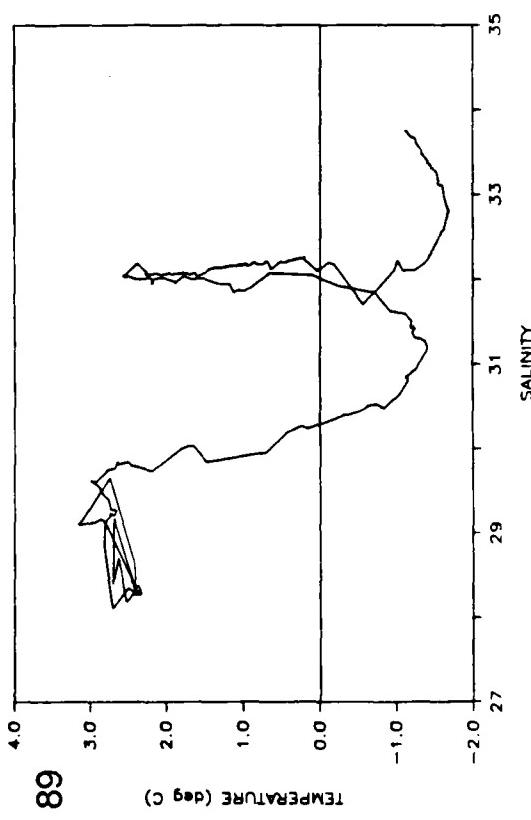
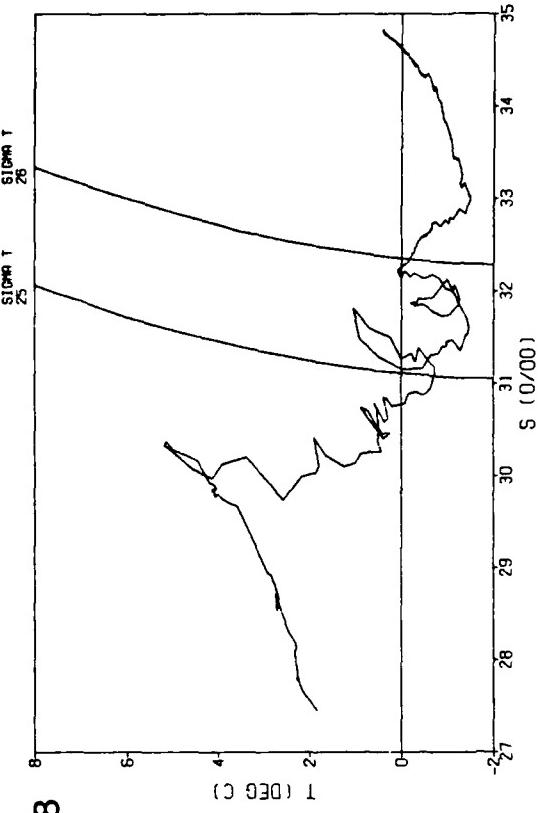
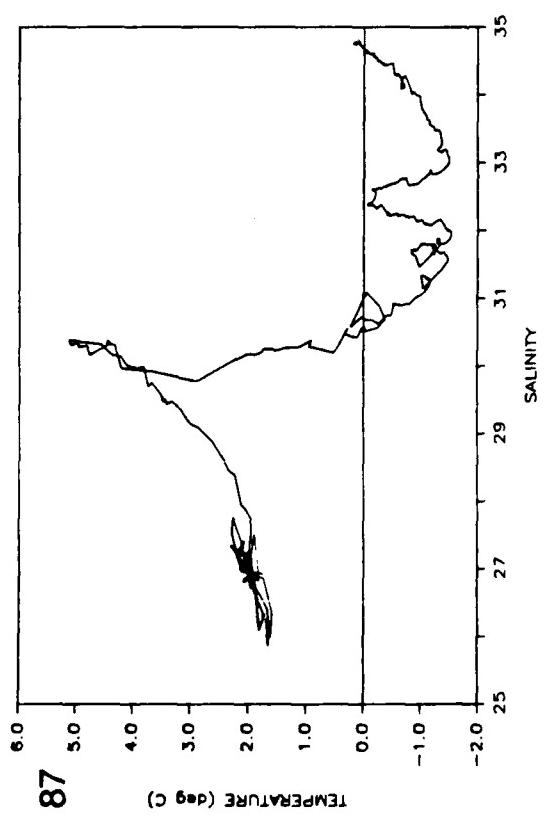
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79	X	X	246	0813	Ship	71 58.1	155 26.6
80	X	X	246	0920	Ship	71 56.7	155 23.4
81							
82							



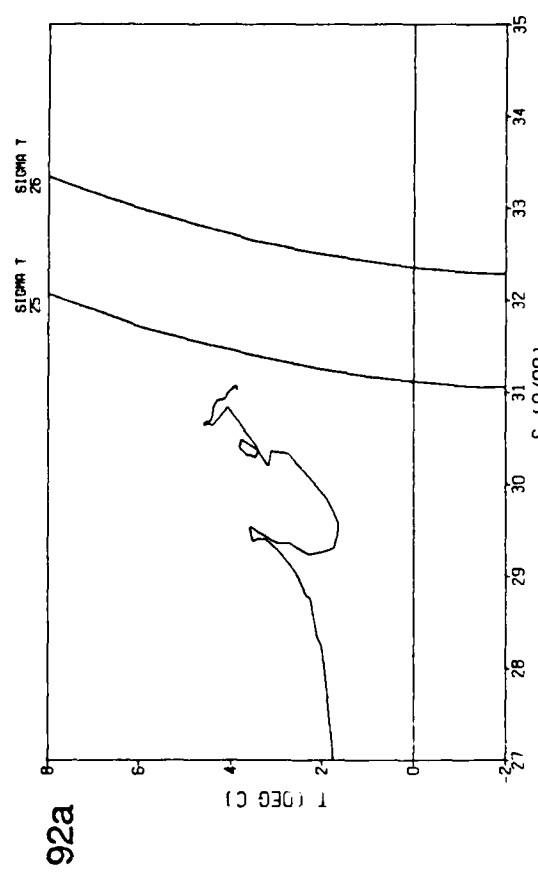
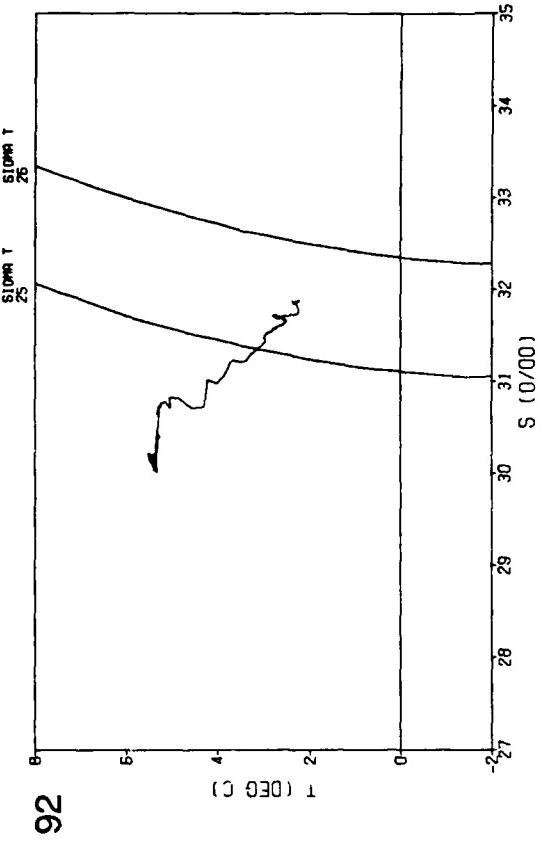
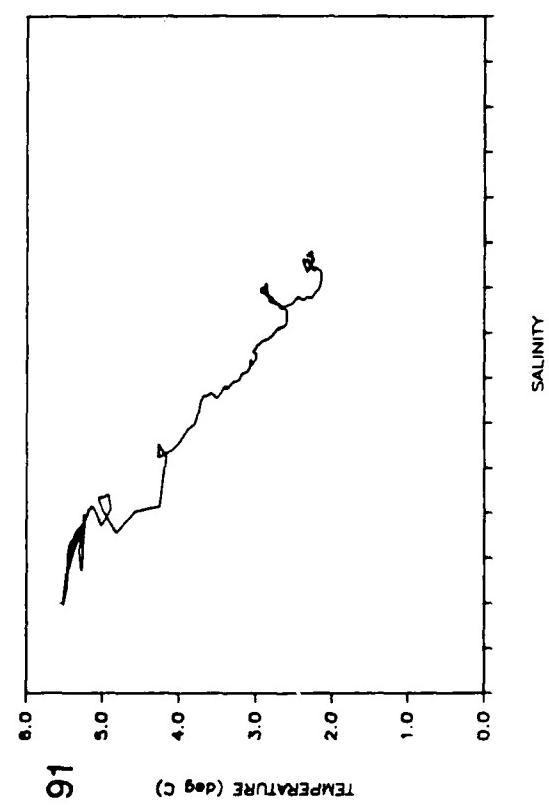
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
83	X	X	246	1044	Ship	71 53.5	155 18.8
84	X	X	246	1150	Ship	71 50.3	155 14.7
85							
86							



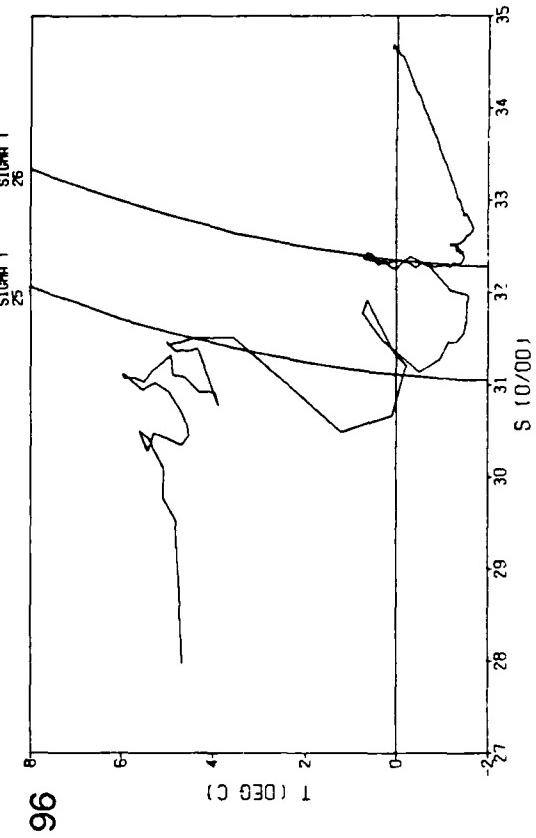
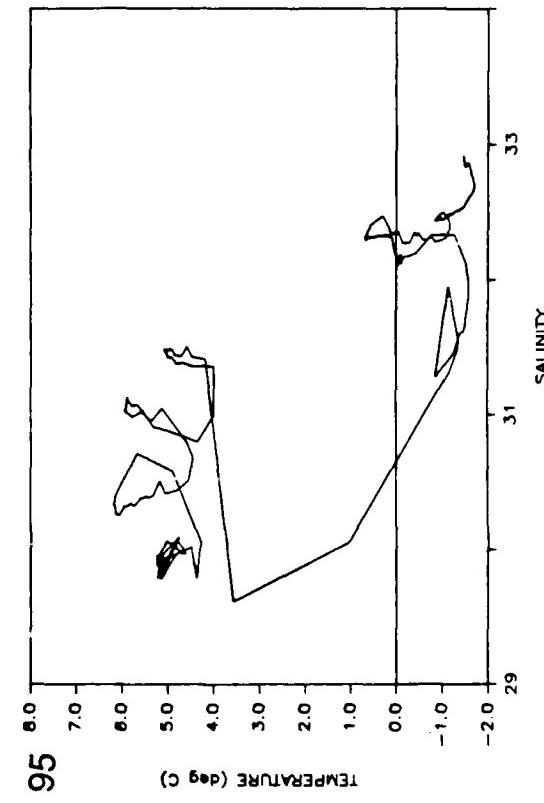
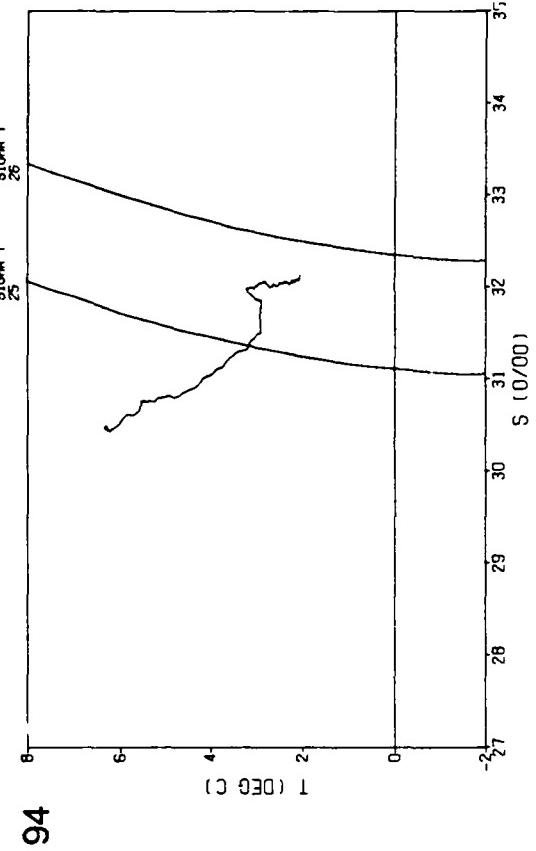
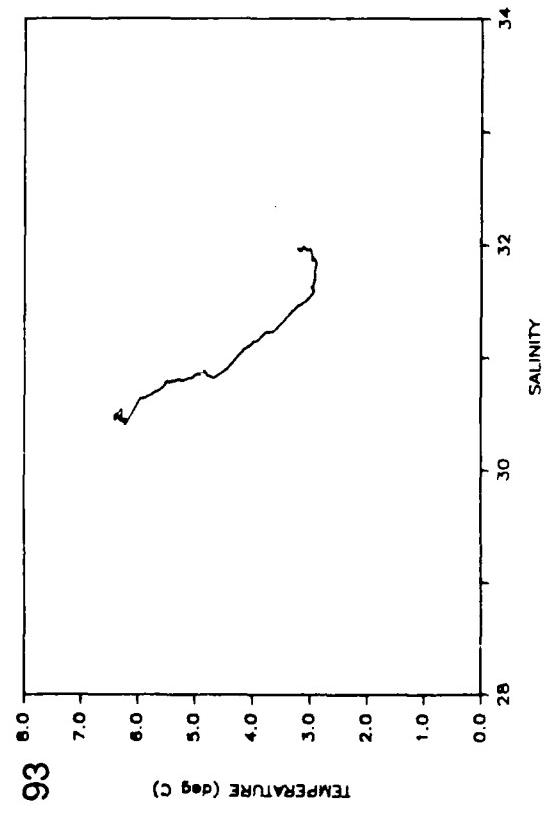
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
87	X	X	246	1251	Ship	71 47.6	155 11.1
88	X	X	246	1400	Ship	71 45.4	155 4.9
89							
90							



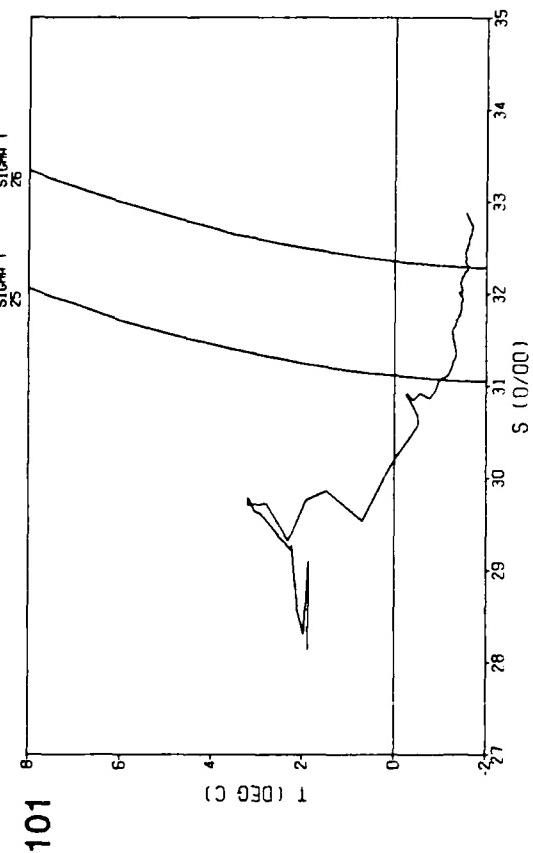
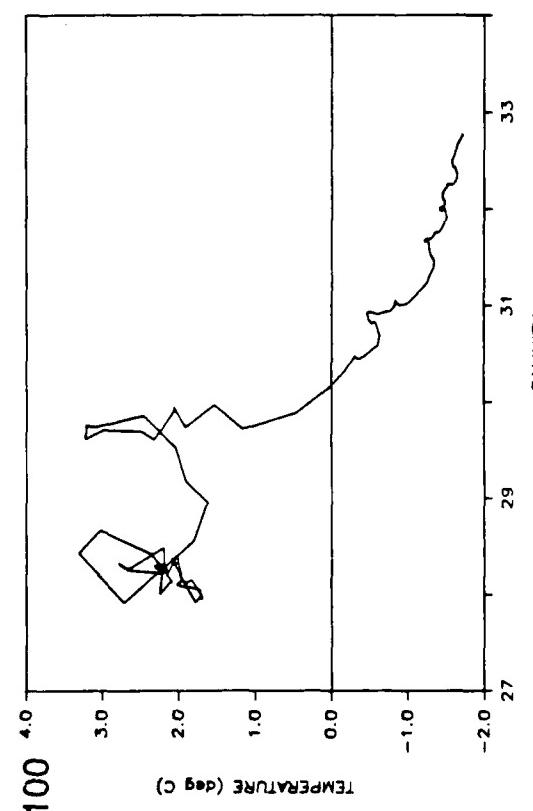
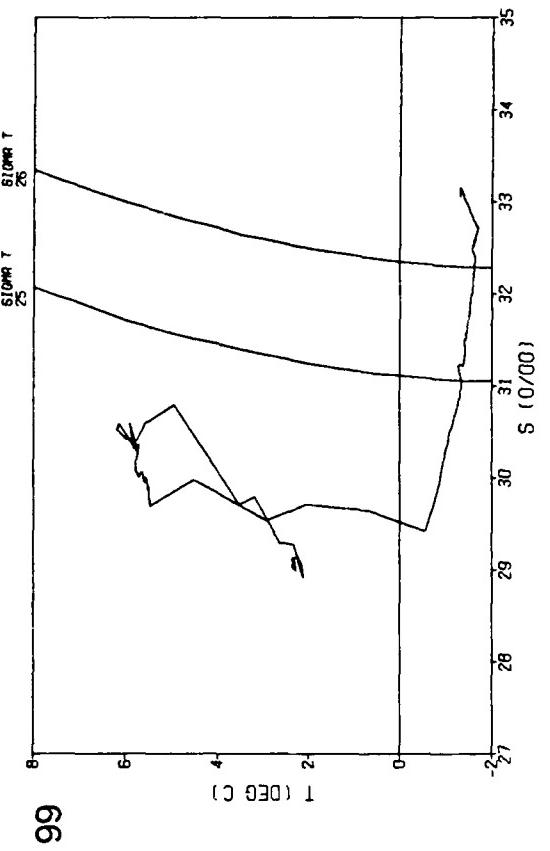
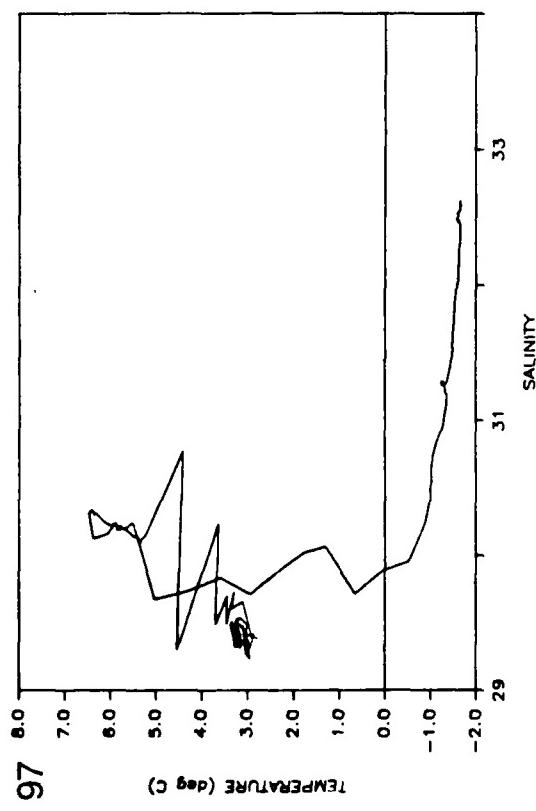
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91	X		246	1502	Ship	71 41.8	155 3.8
92a		X	246	1640	Ship	71 33.7	154 49.3



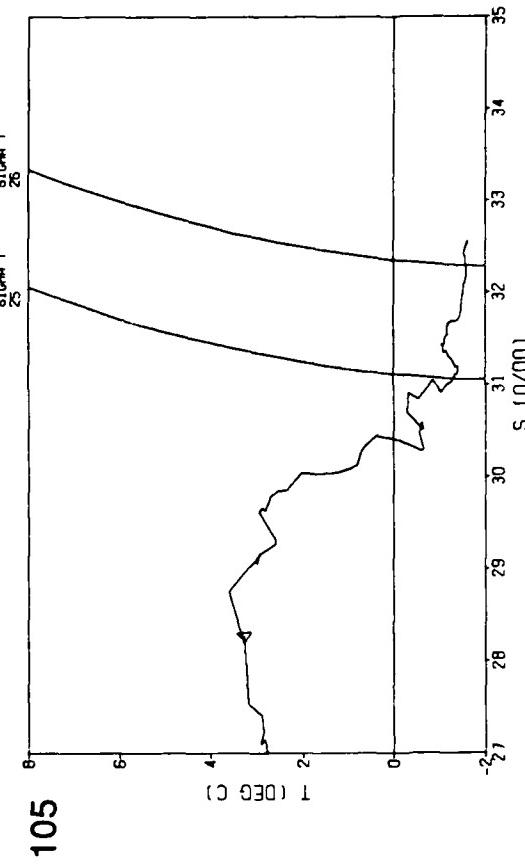
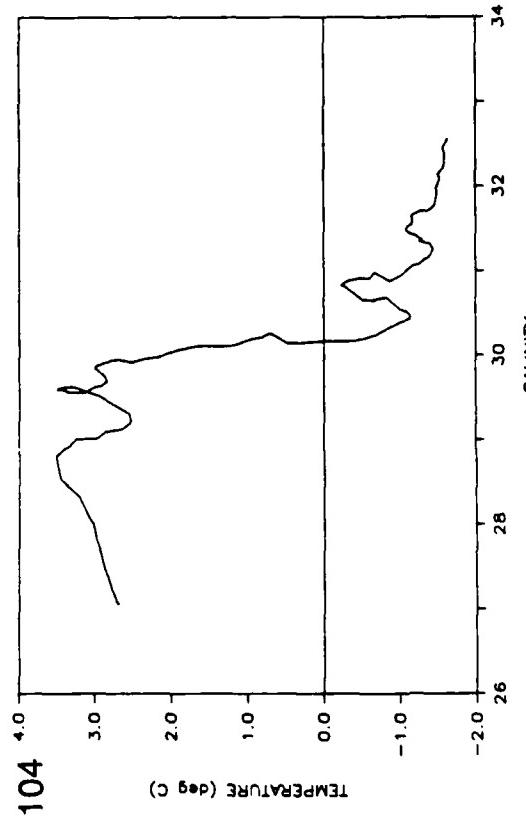
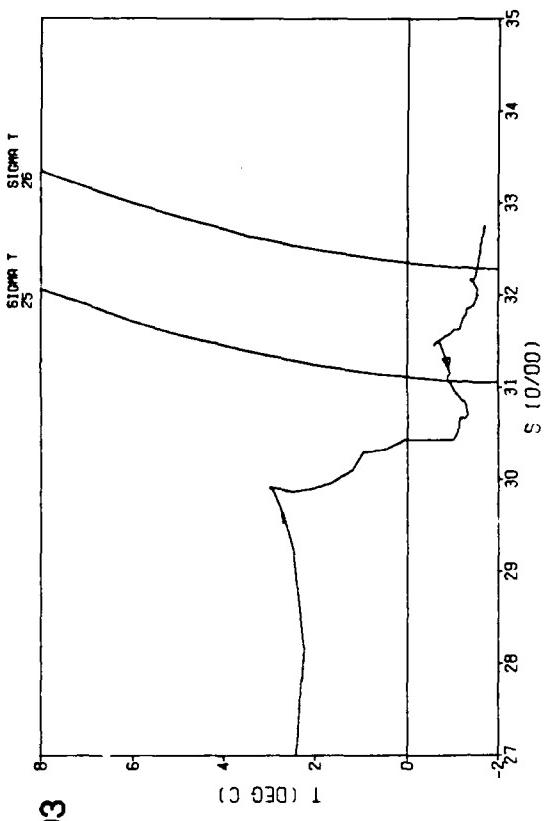
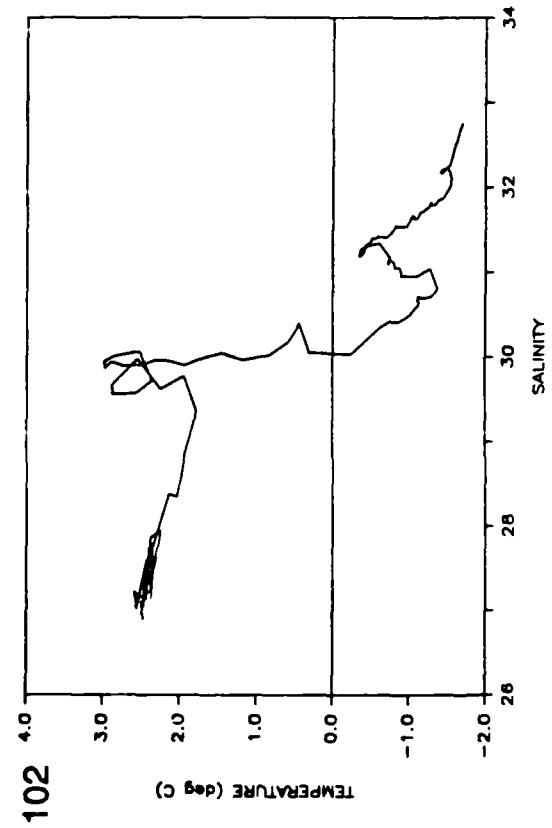
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
93	X	X	247	0048	Ship	71 25.3	156 47.0
94	X	X	247	0202	Ship	71 31.8	156 55.2
95							
96							



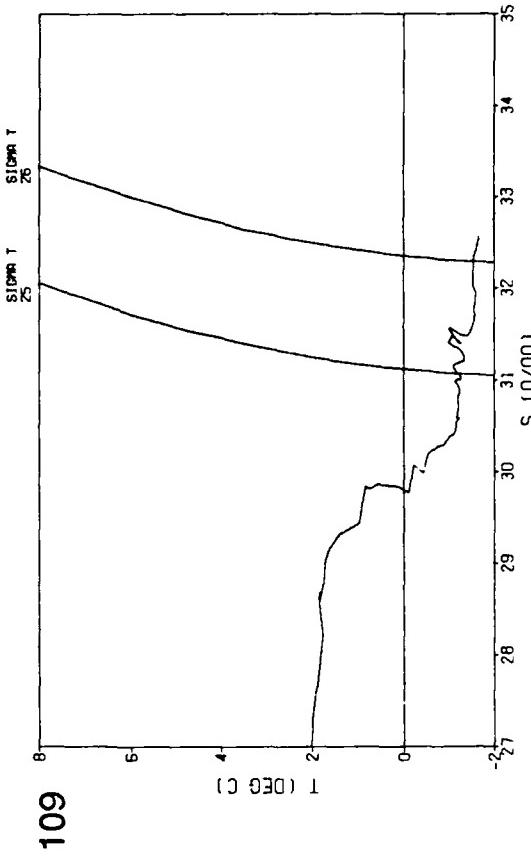
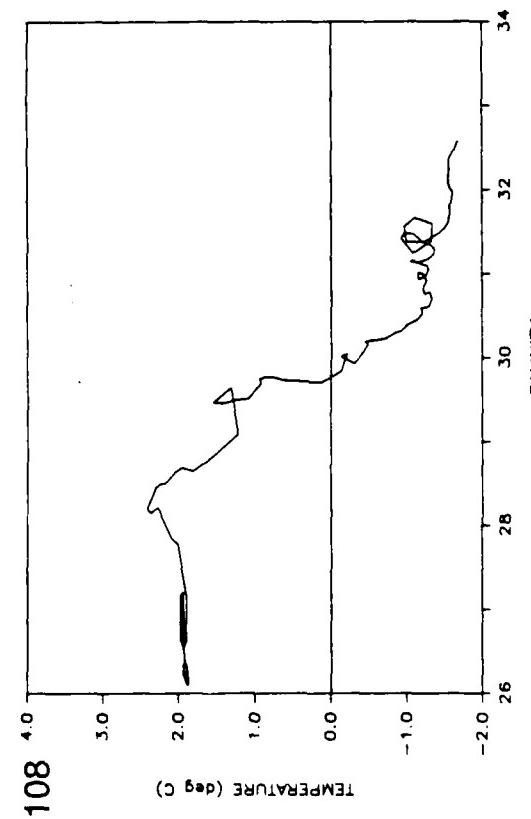
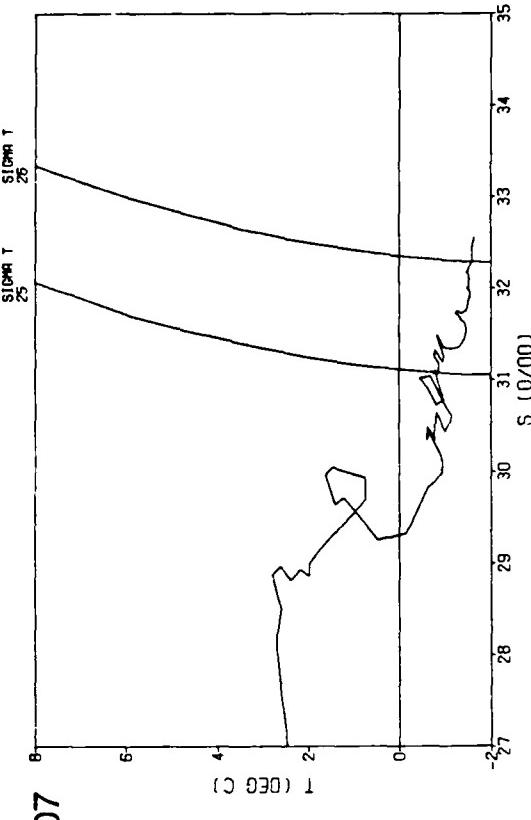
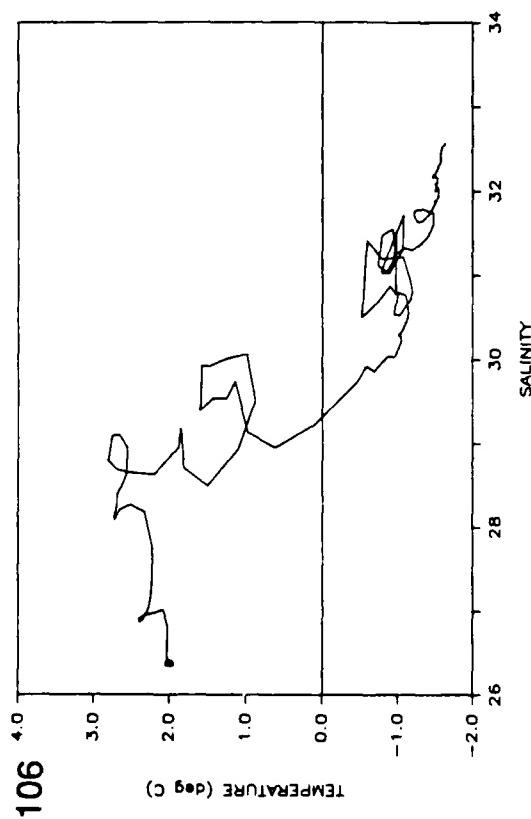
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
97	X		247	0258	Ship	71 34.4	156 58.4
99	X	X	247	0344	Ship	71 37.7	157 3.3
100							
101	X	X					



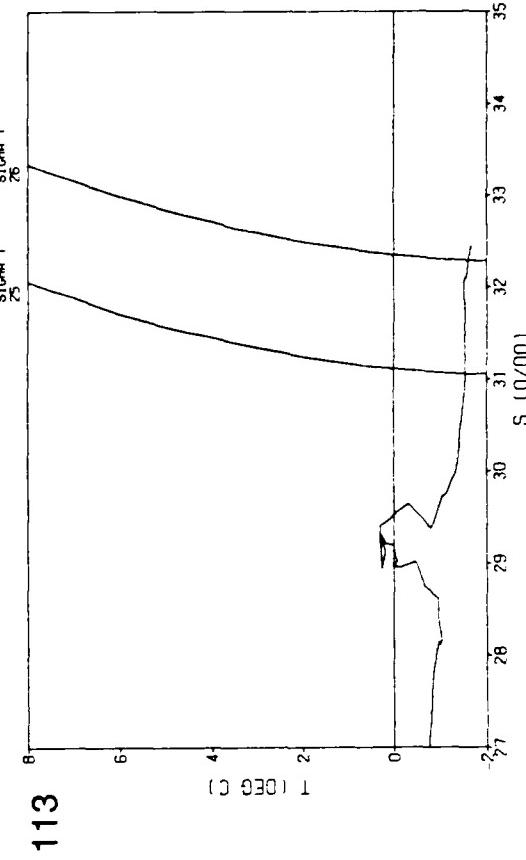
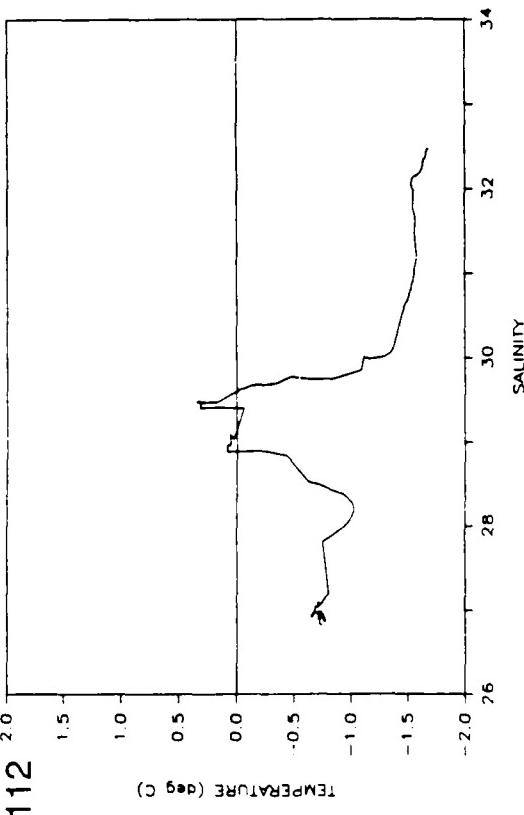
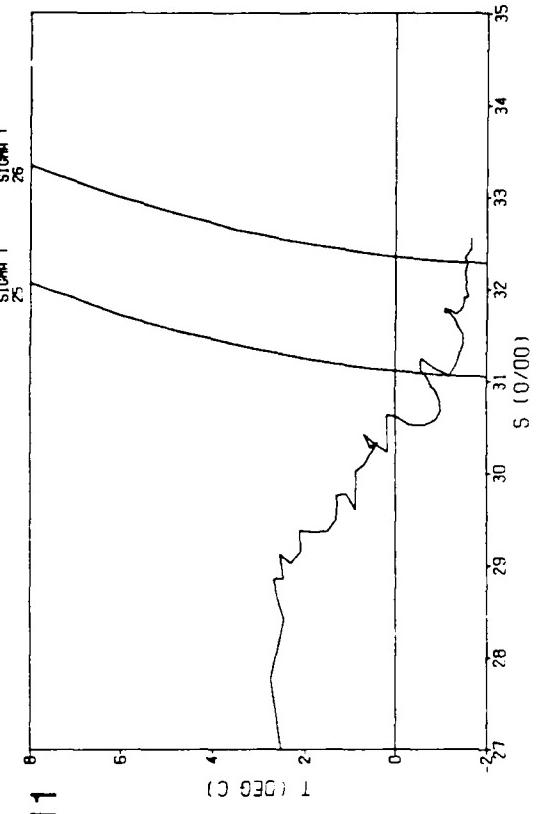
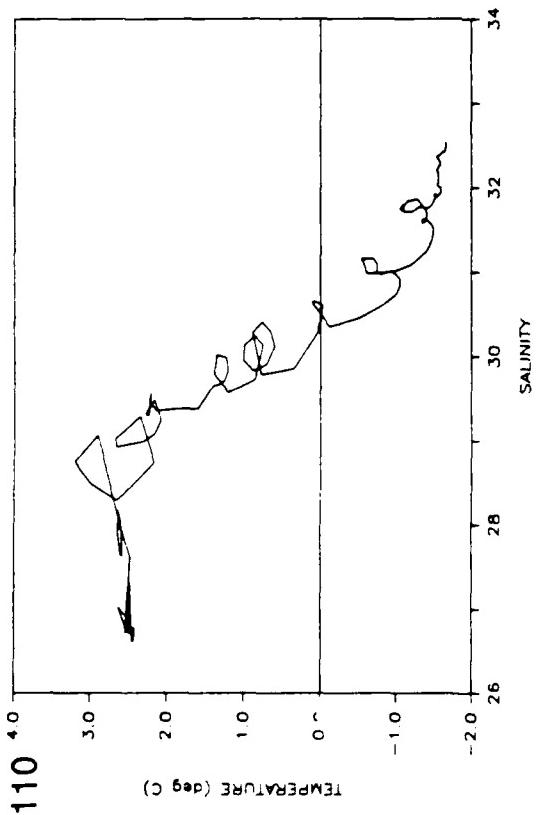
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
102	X	X	247	0430	Ship	71 40.2	157 6.4
103	X	X	247	0512	Ship	71 43.1	157 8.0
104	X	X					
105	X	X					



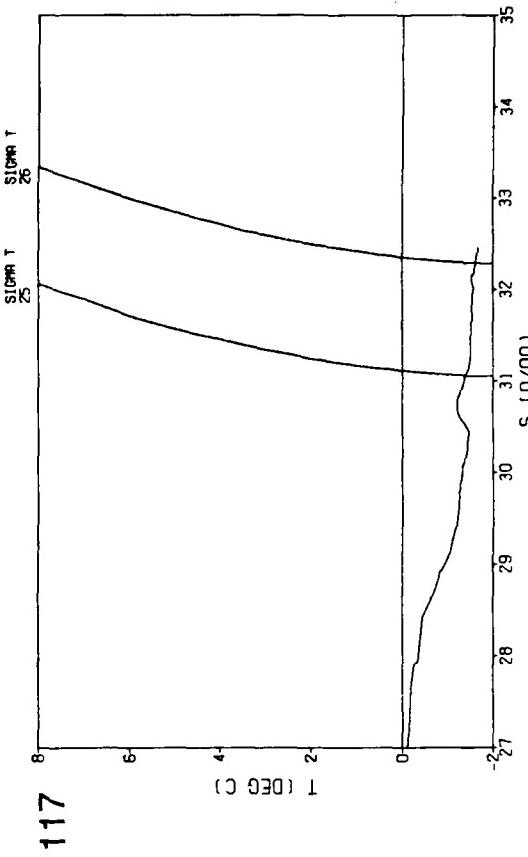
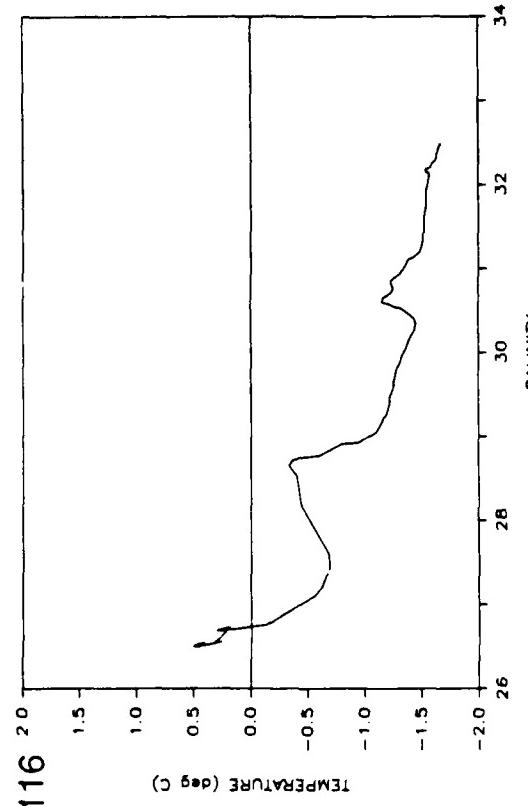
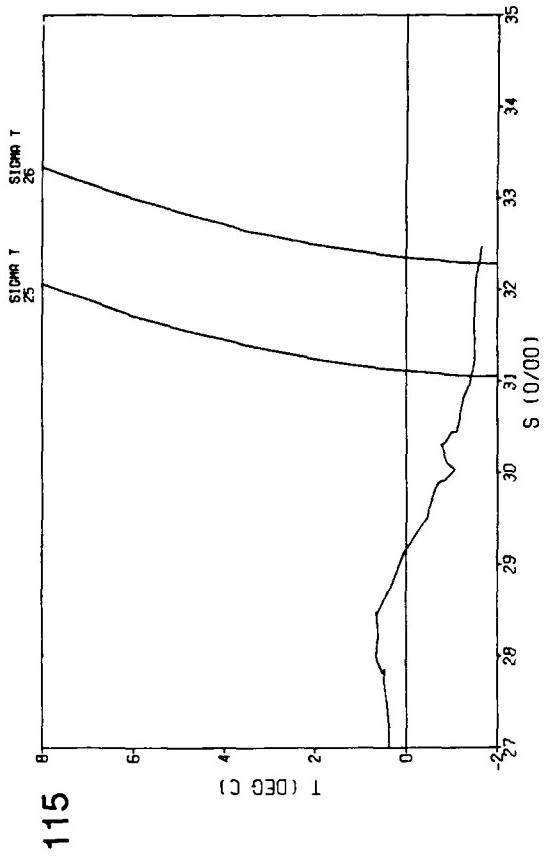
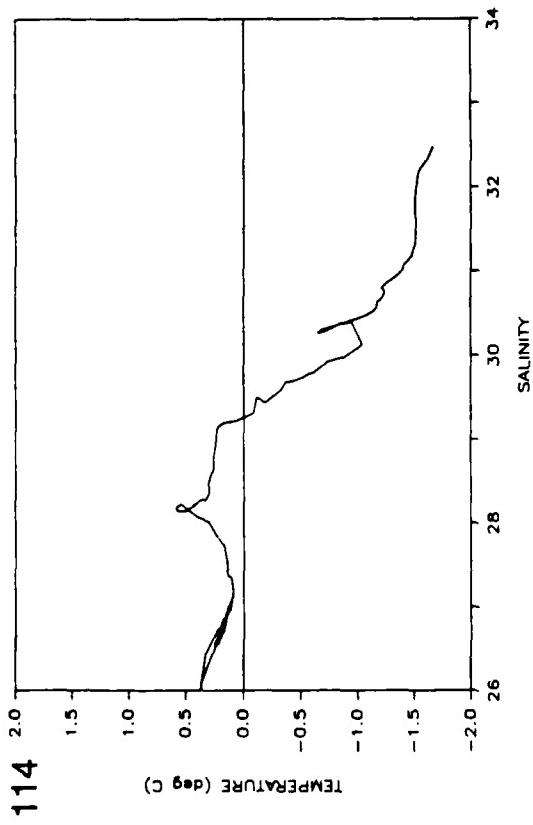
Station Number	ASL Cast	APL Cast	Julian Day	GMT hour	Platform	Latitude	Longitude
106	X	X	247	0554	Ship	71 45.9	157 12.4
107	X	X	247	0636	Ship	71 48.9	157 16.4
108							
109							



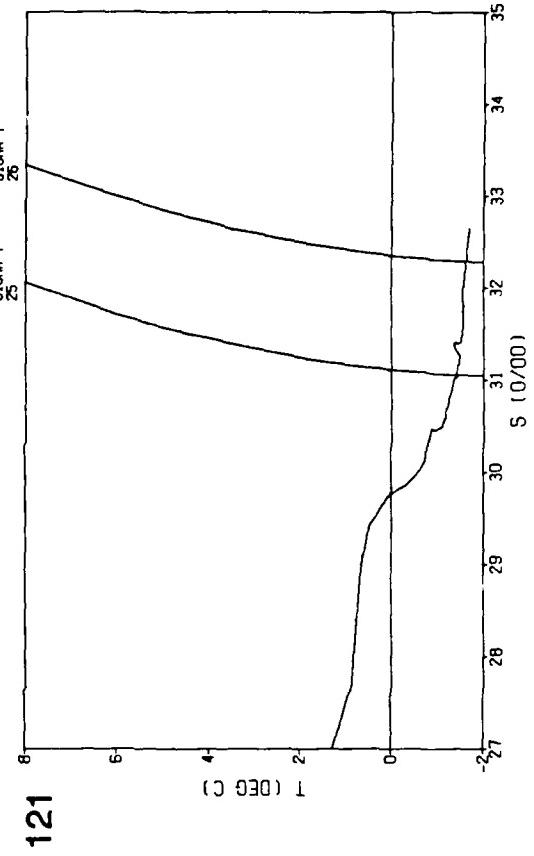
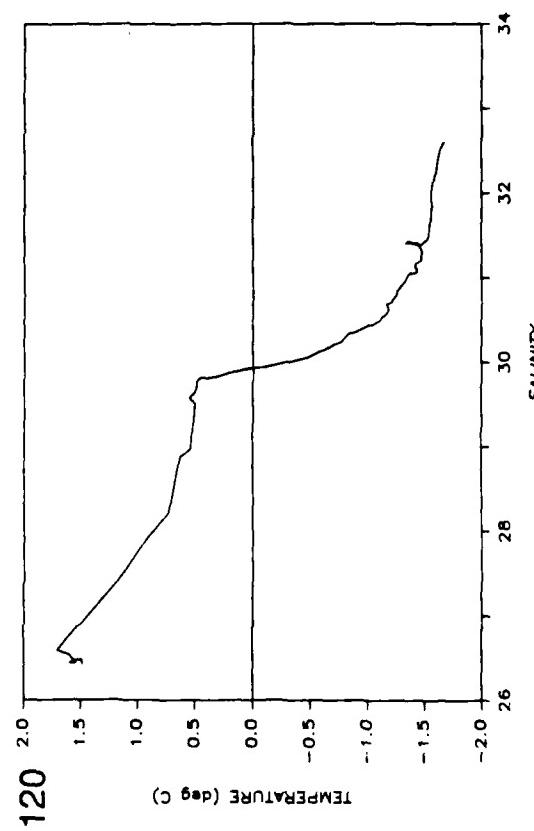
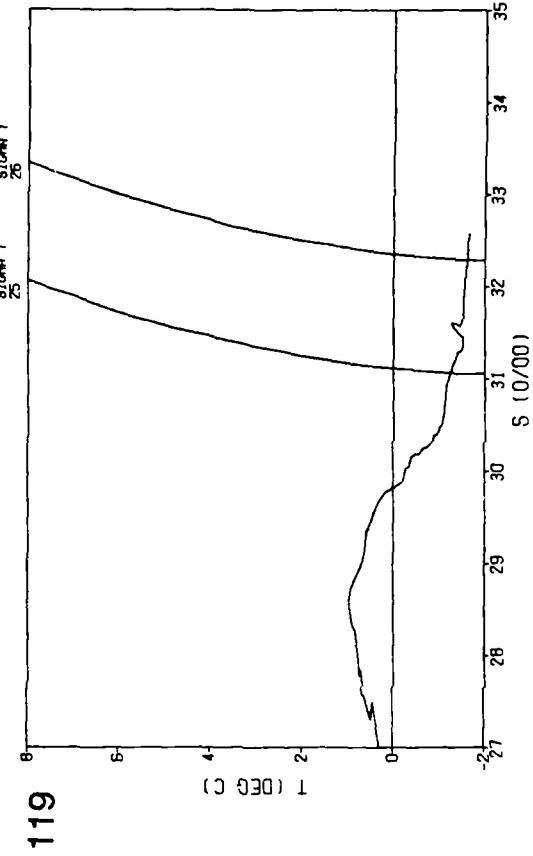
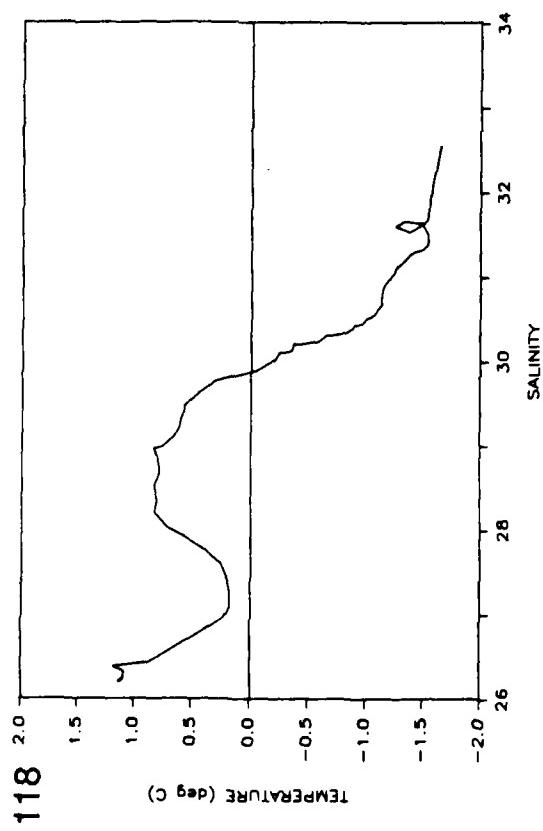
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
110	X	X	247	0727	Ship	71 54.7	157 22.6
111	X	X	247	1034	Ship	71 36.2	159 9.9
112							
113	X	X					



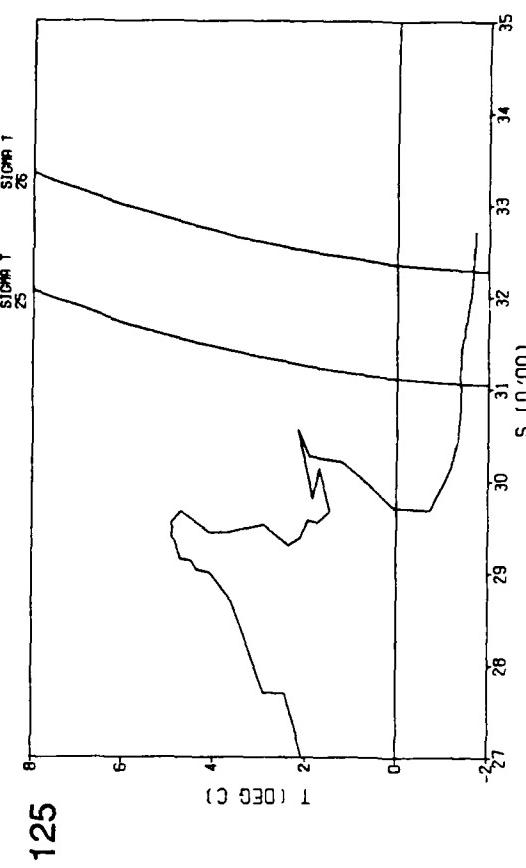
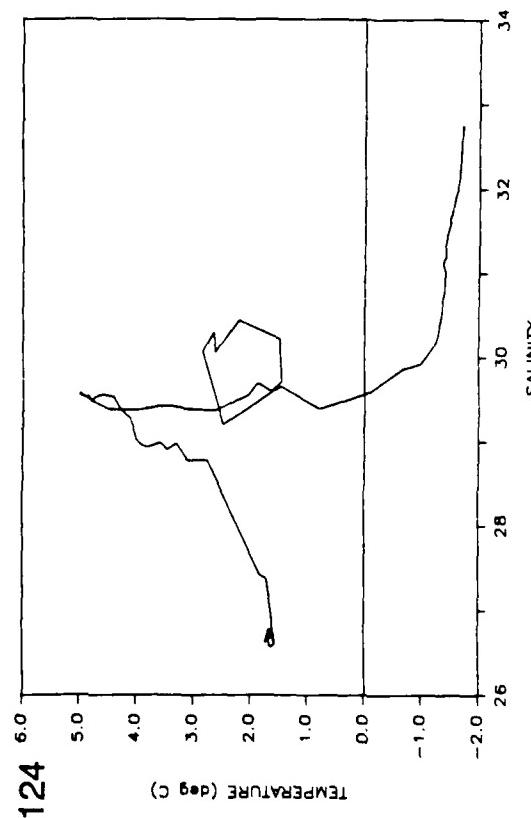
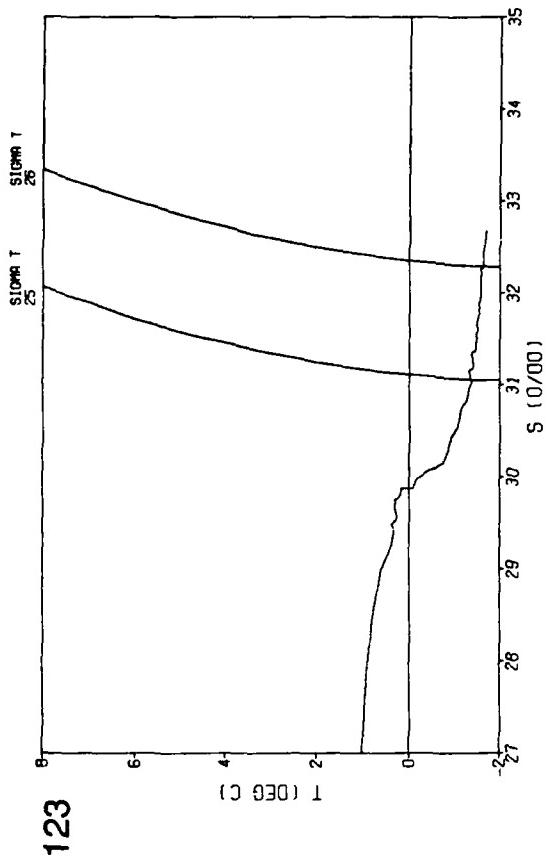
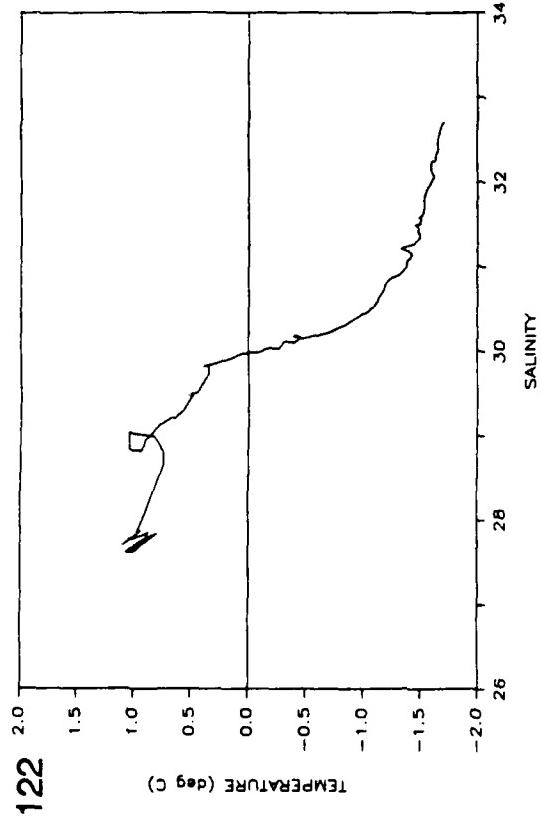
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
114	X		247	1135	Ship	71 30.5	159 3.1
115	X	X					
116	X	X	247	1221	Ship	71 27.1	158 57.9
117							



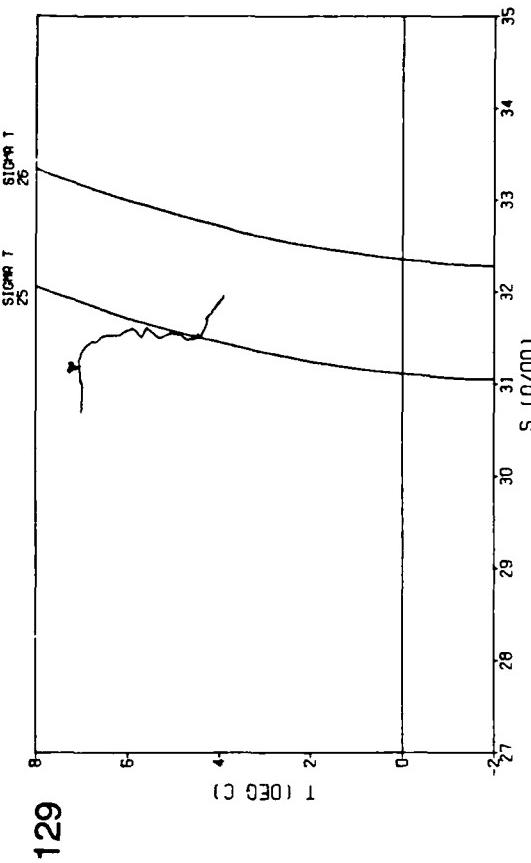
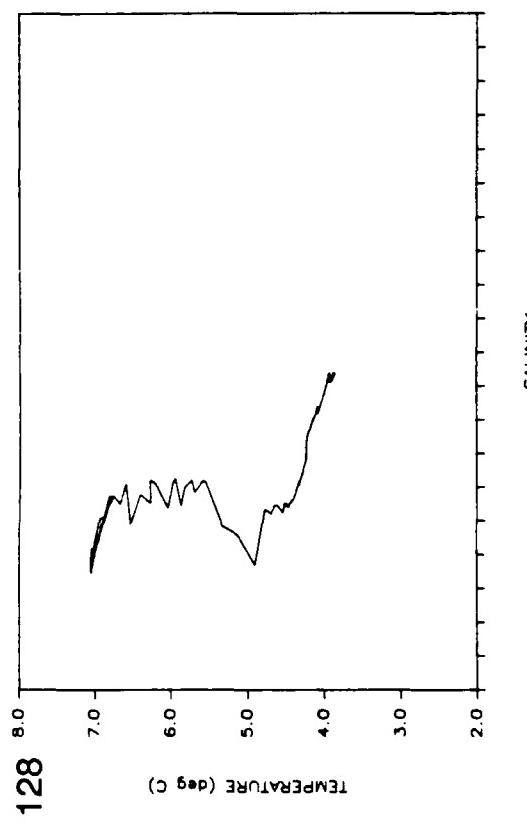
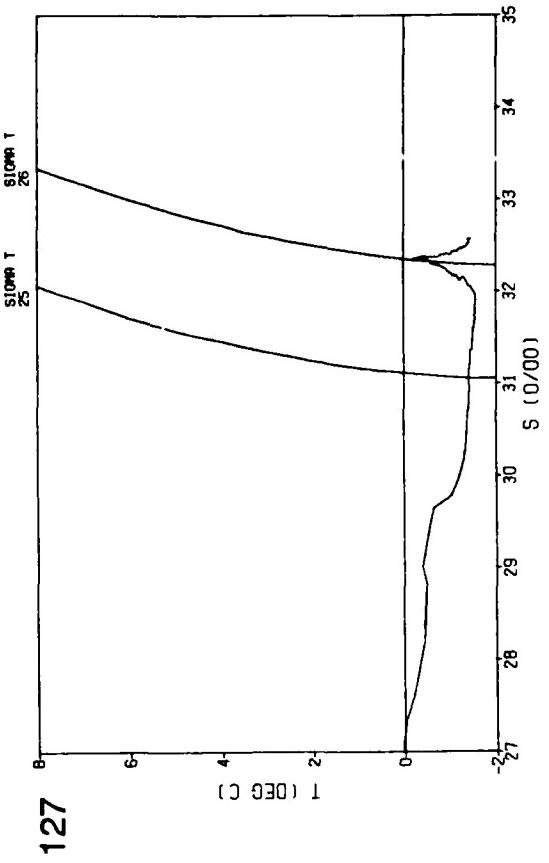
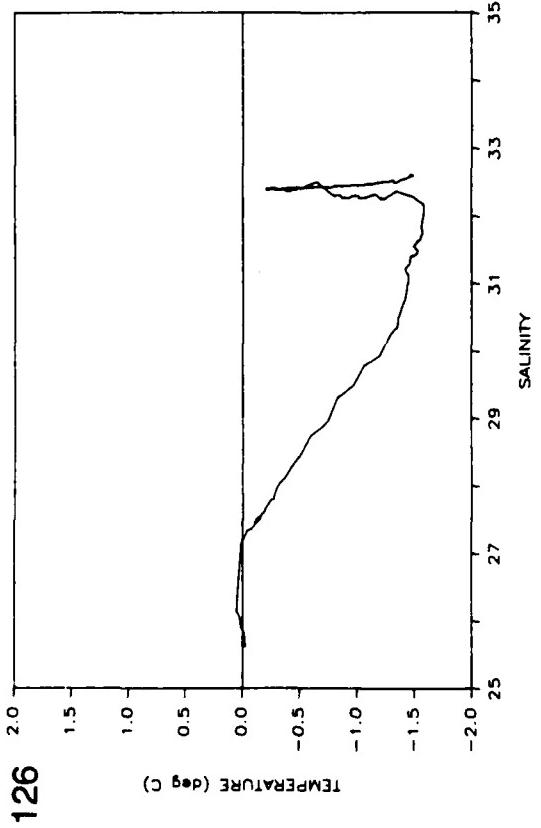
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
118	X	X	247	1303	Ship	71 25.1	158 55.9
119	X	X	247	1343	Ship	71 22.2	158 53.9
120	X	X					
121							



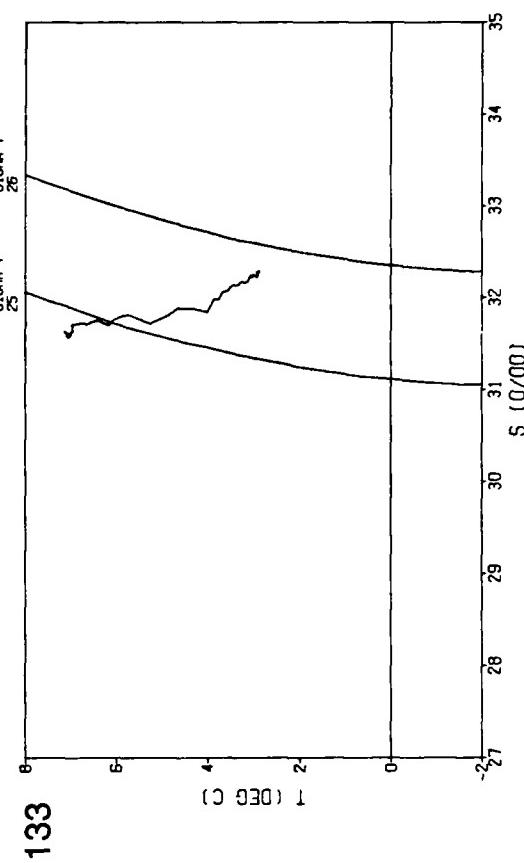
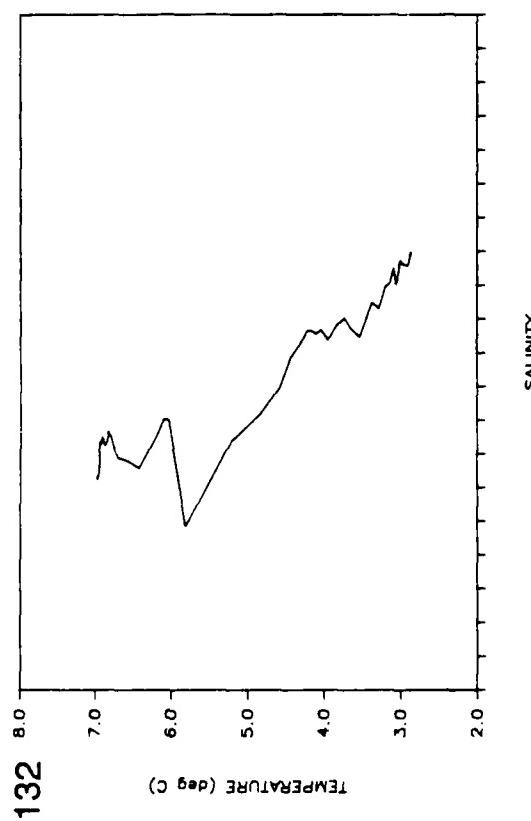
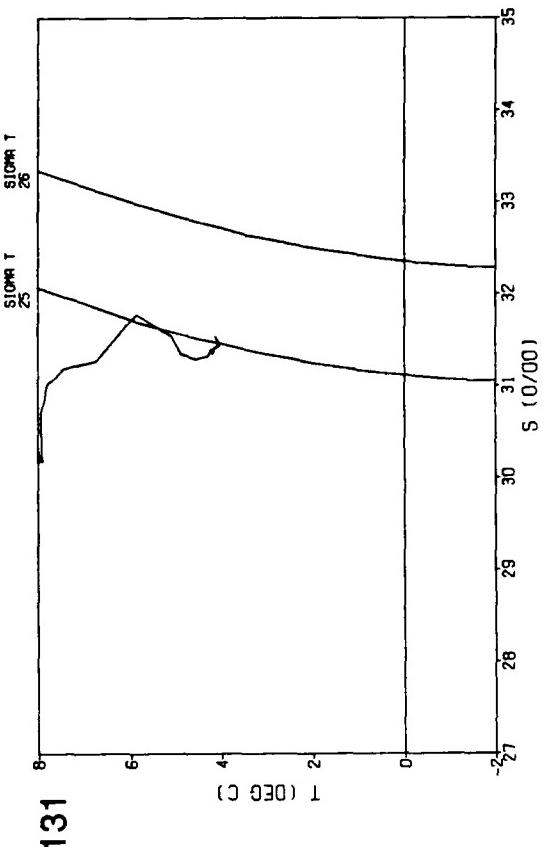
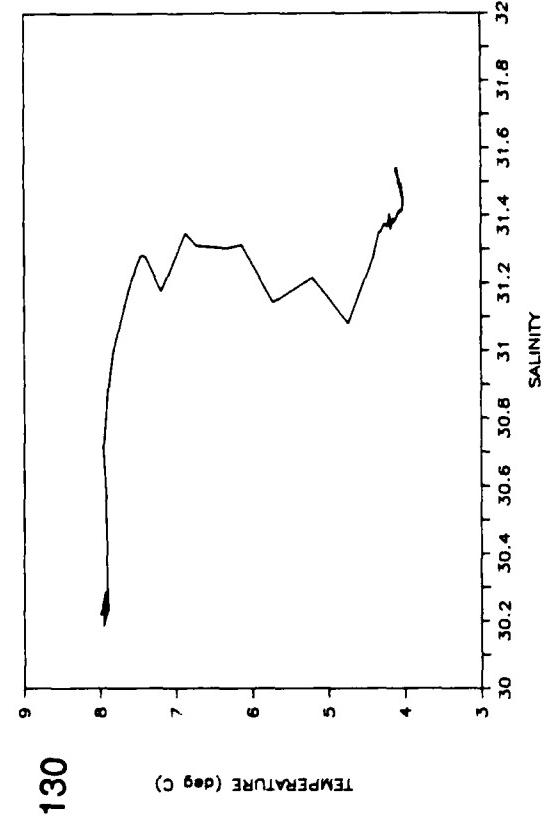
Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
122	X	X	247	1438	Ship	71 18.8	158 49.5
123	X	X	247	1521	Ship	71 16.2	158 47.0
124	X	X					
125	X	X					



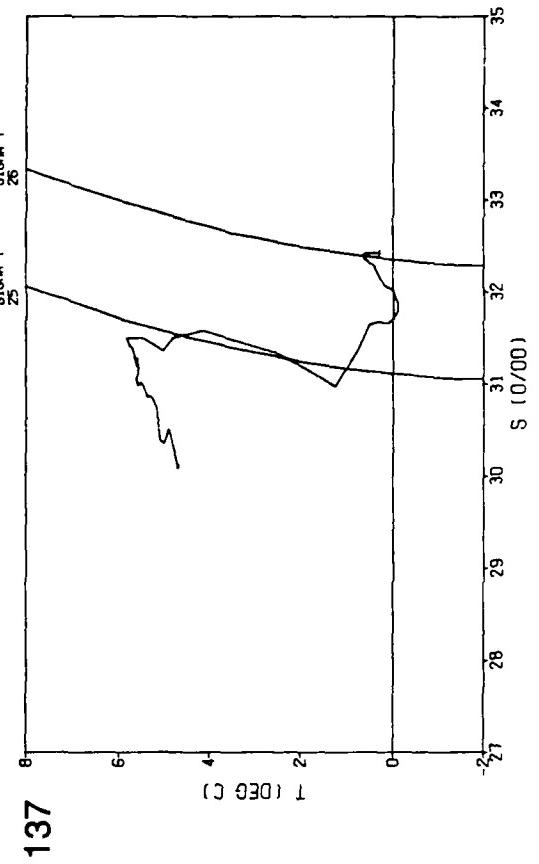
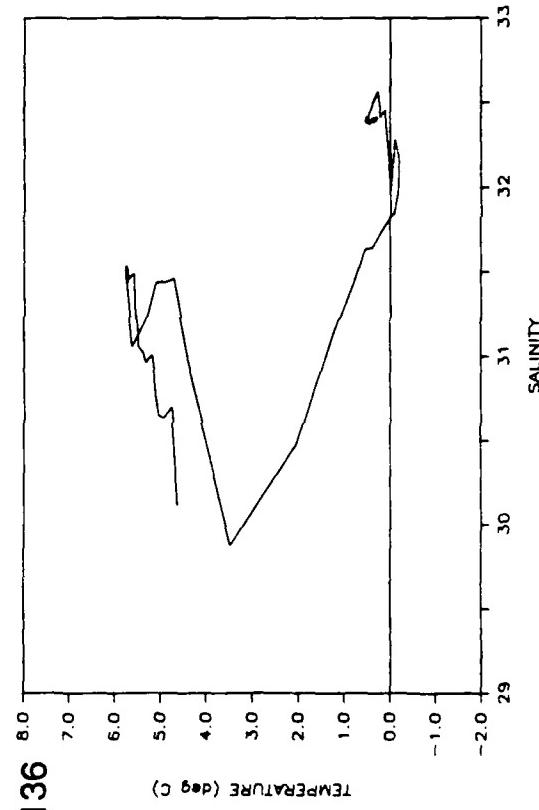
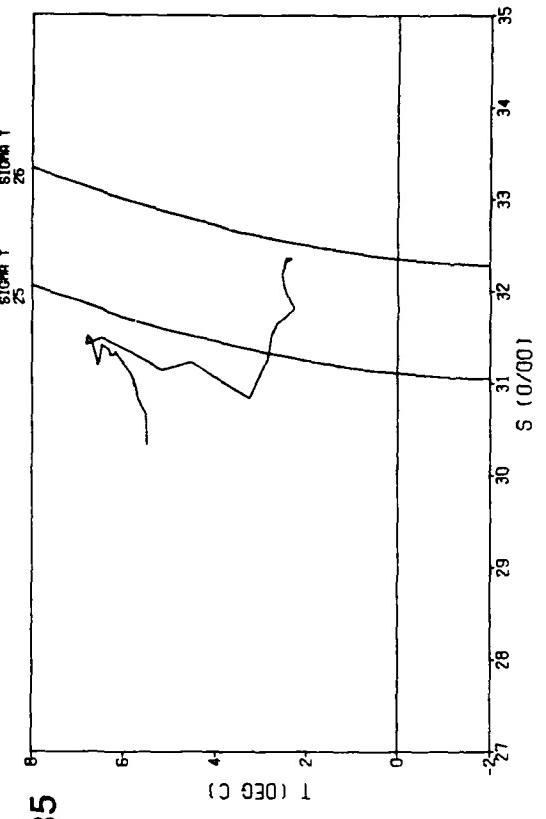
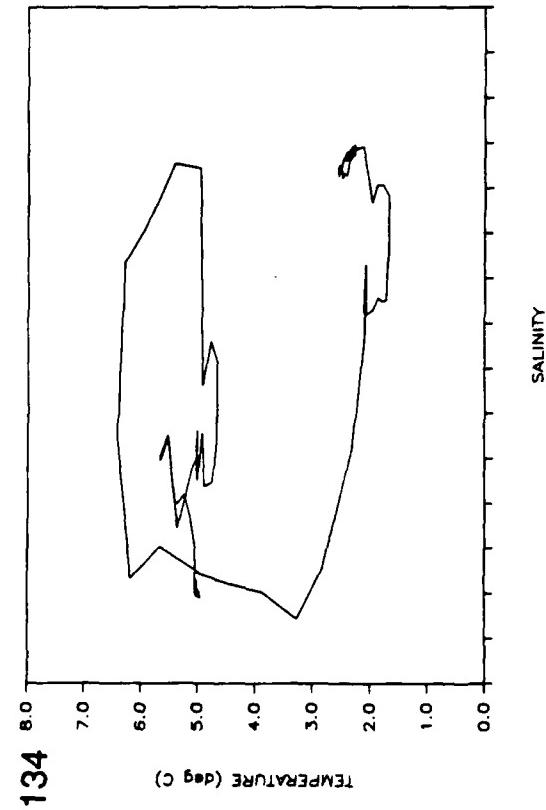
Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
126	X	X	247	1627	Ship	71 13.6	158 43.1
127	X	X	247	1726	Ship	71 9.0	158 38.2
128							
129							



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
130	X		247	2140	Ship	70 49.2	160 13.7
131	X	X	247	2236	Ship	70 55.4	160 18.9
132	X	X					
133	X	X					

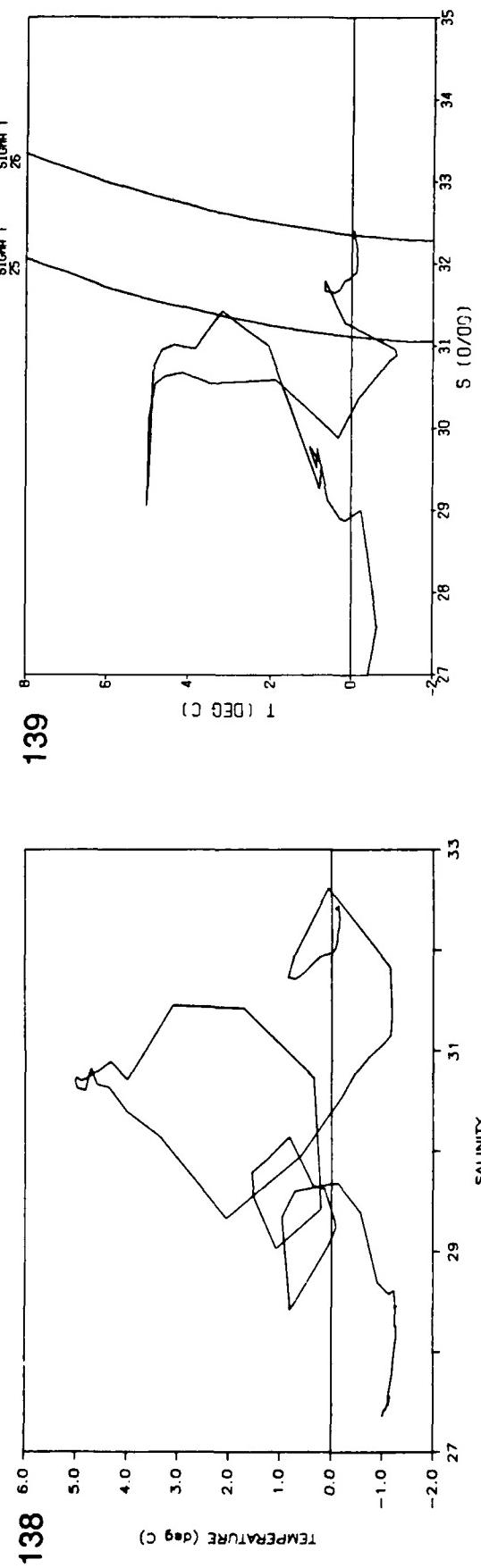


Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
134	X	X	247	2313	Ship	70 57.5	160 24.3
135	X	X	248	0012	Ship	71 0.6	160 27.1
136	X	X					
137	X	X					

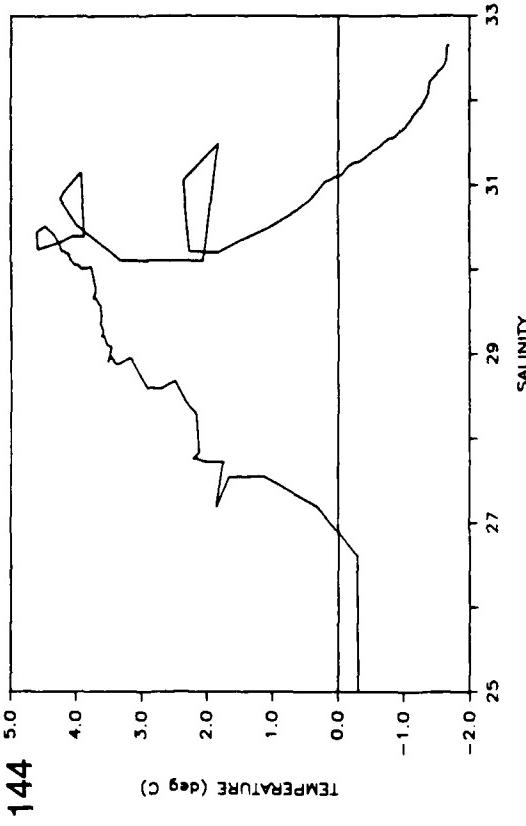
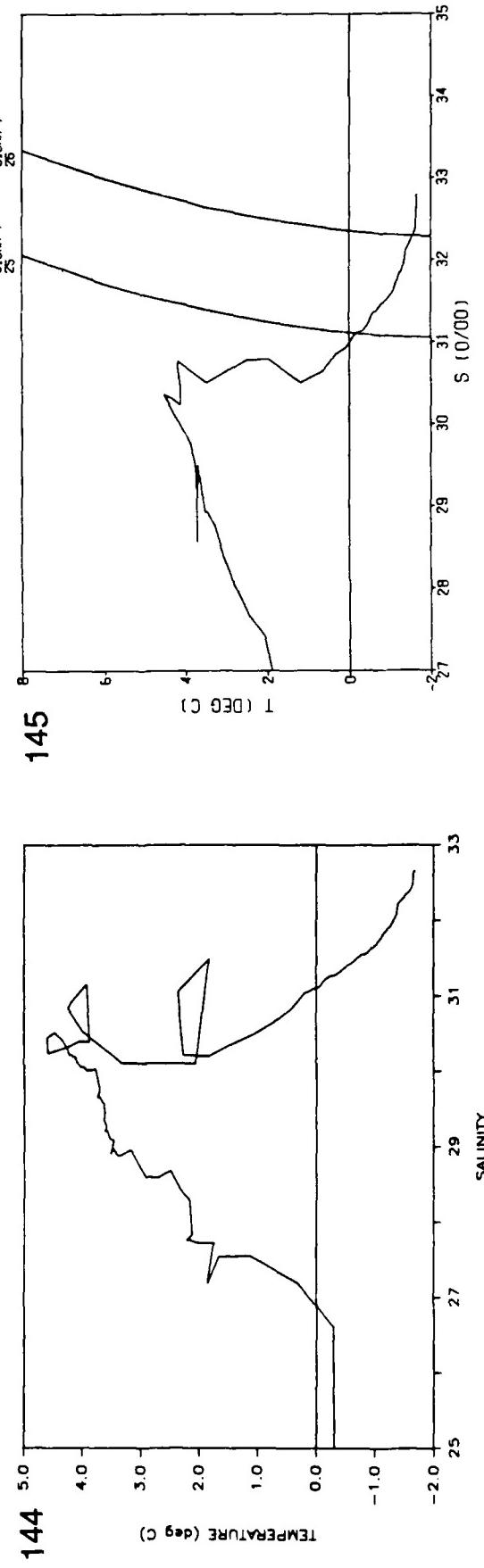
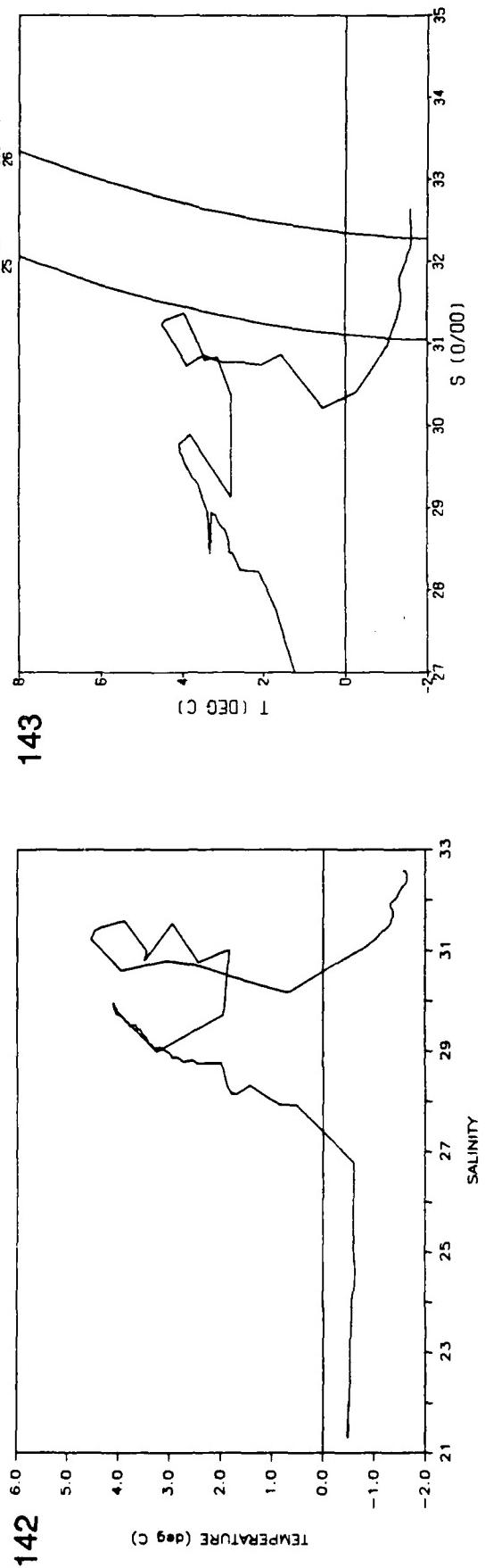


134 135 136 137  
ASL APL  
Cast Cast  
Temp Temp  
Depth Depth  
Sigma Sigma  
T T  
S S  
SALINITY  
TEMPERATURE (deg C)  
SIGMA T  
T (DEG C)  
S (0/00)

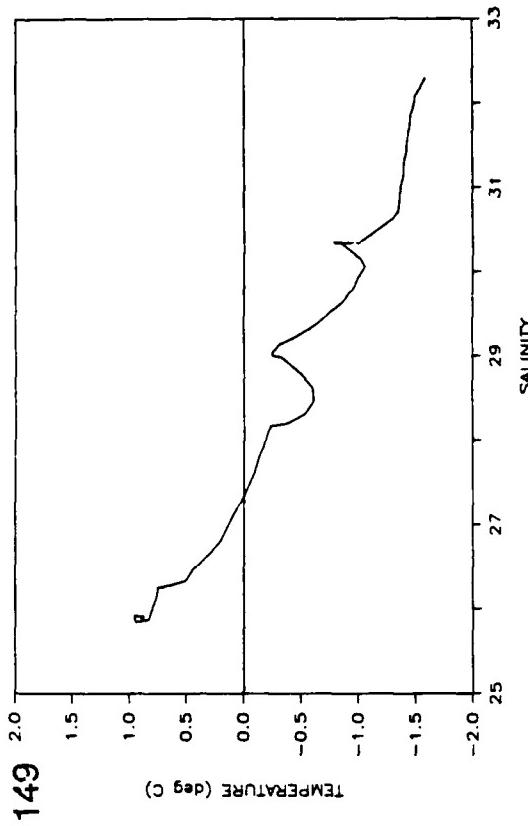
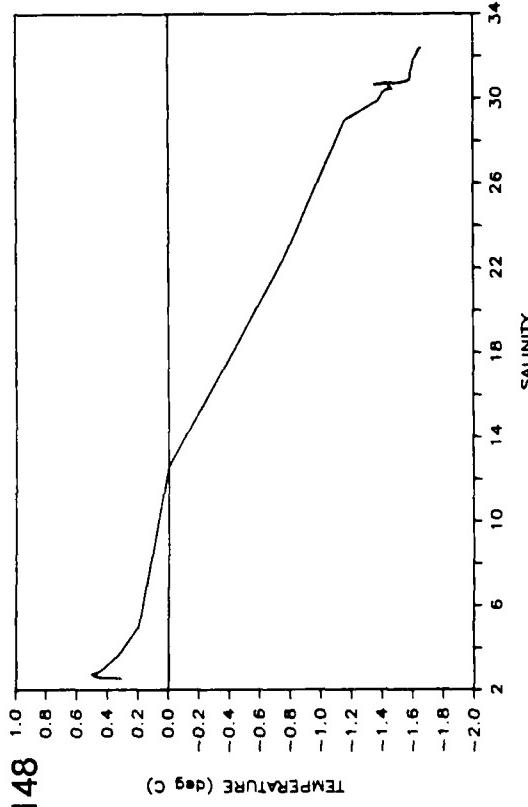
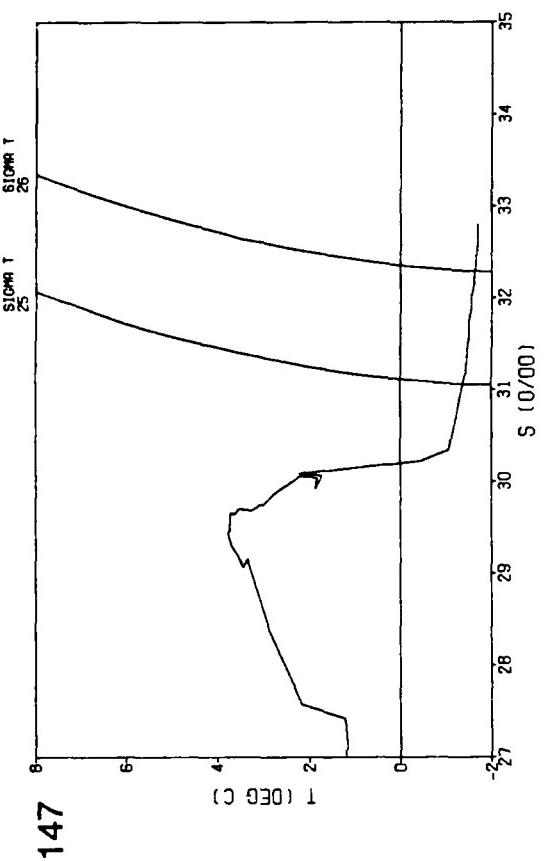
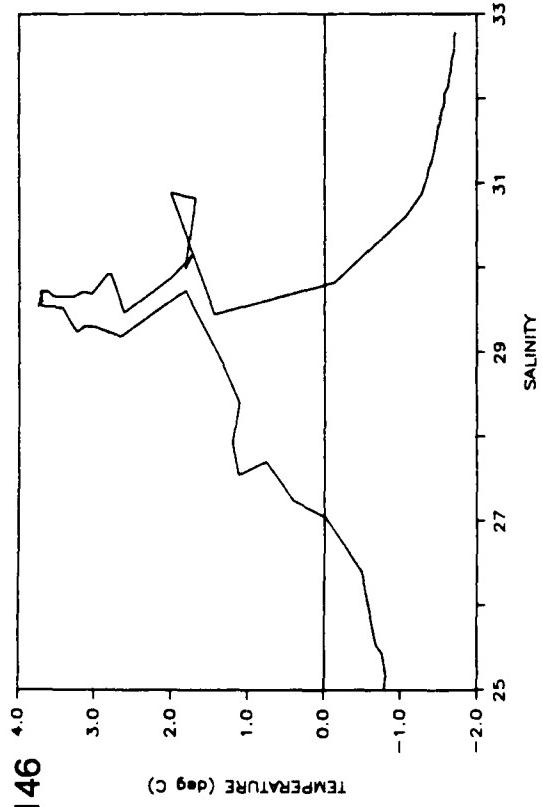
Station Number	ASL Cast	APL Cast	Julian Day	GMT hour	Platform	Latitude	Longitude
138	X		248	0054	Ship	71 3.2	160 29.5
139	X	X					
140	X	X	248	0137	Ship	71 5.9	160 32.7
141	X	X					



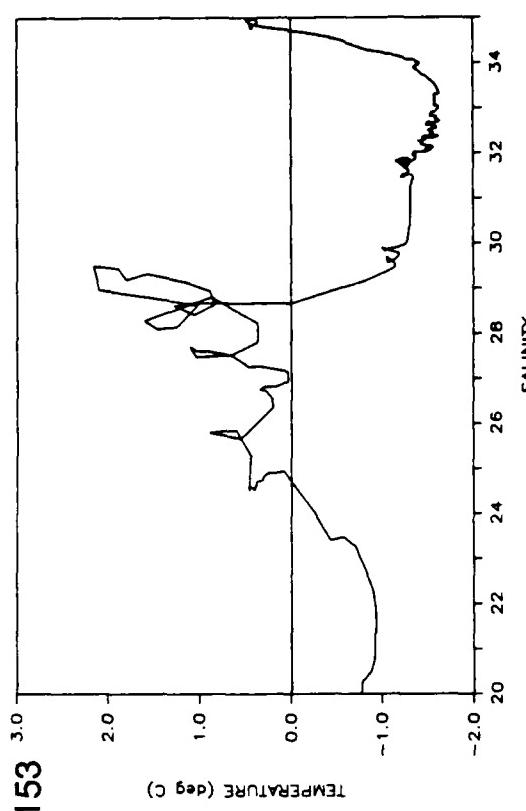
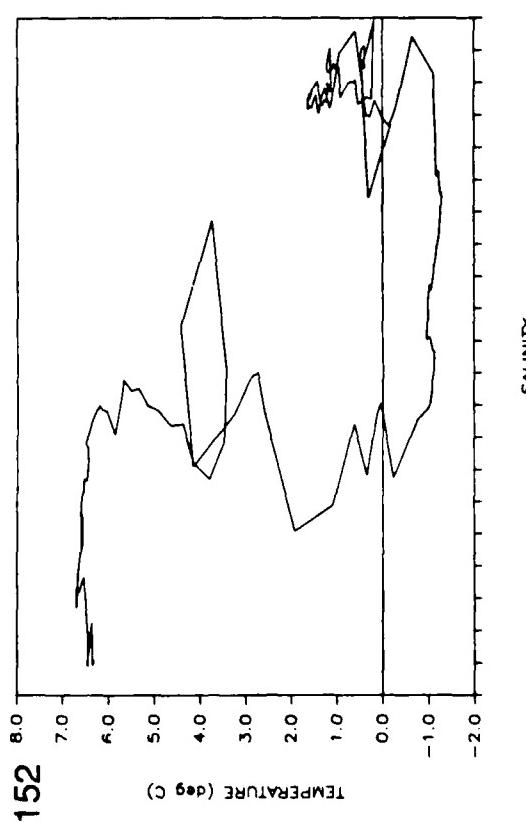
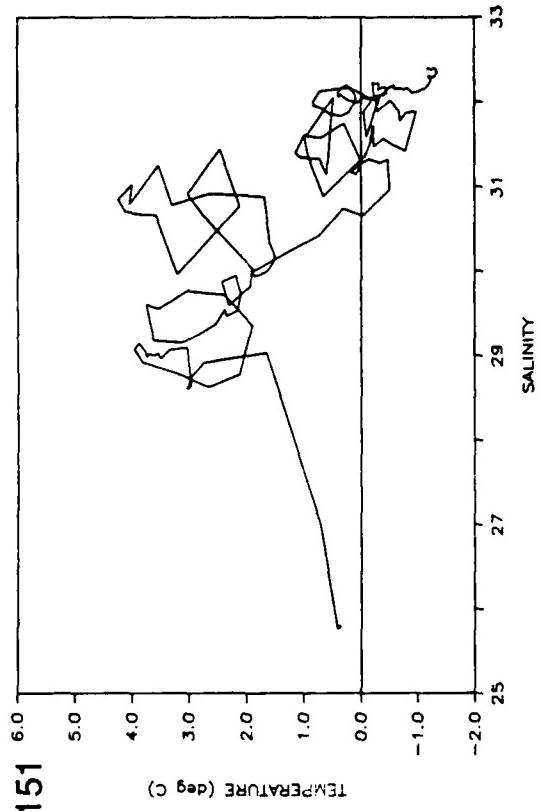
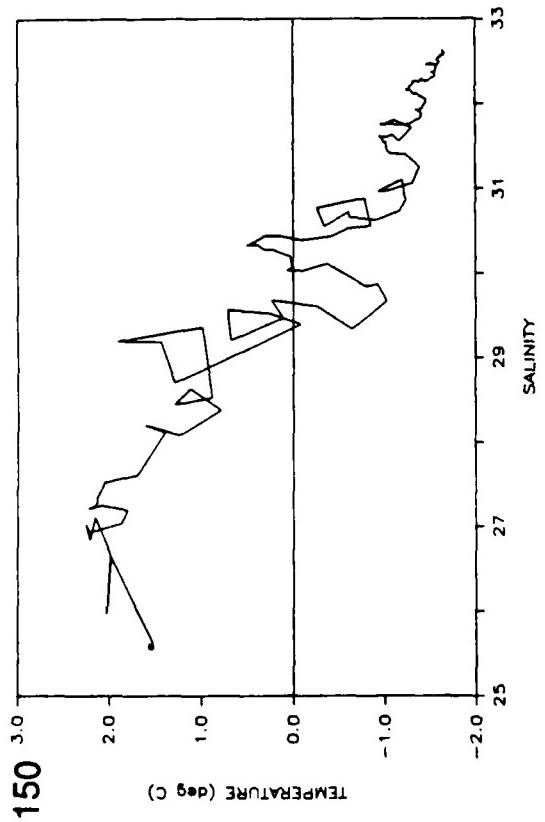
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142	X	X	248	0244	Ship	71 8.9	160 36.5
143	X	X	248	0345	Ship	71 11.6	160 39.8
144							
145							



Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
146	X	X	248	0541	Ship	71 17.0	160 47.7
147	X	X	248	1848	Ship	71 50.5	161 13.5
148	X	X	249	2338	Ship	72 0.0	160 0.0
149							



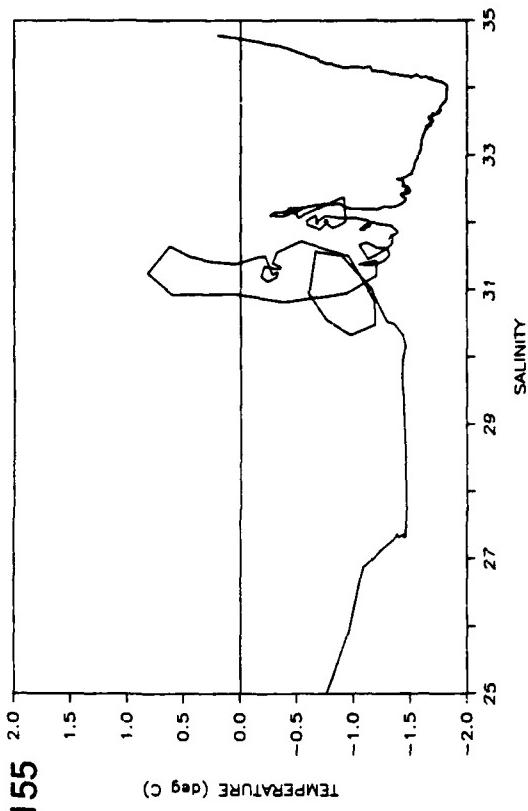
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150	X		249	0429	Ship	72 0.0	156 45.7
151	X		249	0648	Ship	72 0.0	155 25.5
152	X		249	0904	Ship	71 59.8	154 4.6
153	X		249	1158	Ship	71 59.2	152 48.5



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
154	X		249	1653	Ship	72 0.4	151 24.9
155	XX		249	2341	Ship	72 0.1	150 7.3
156	XX		250	0731	Ship	72 0.1	148 44.6
157	X		250	1840	Ship	71 50.0	148 43.5

154

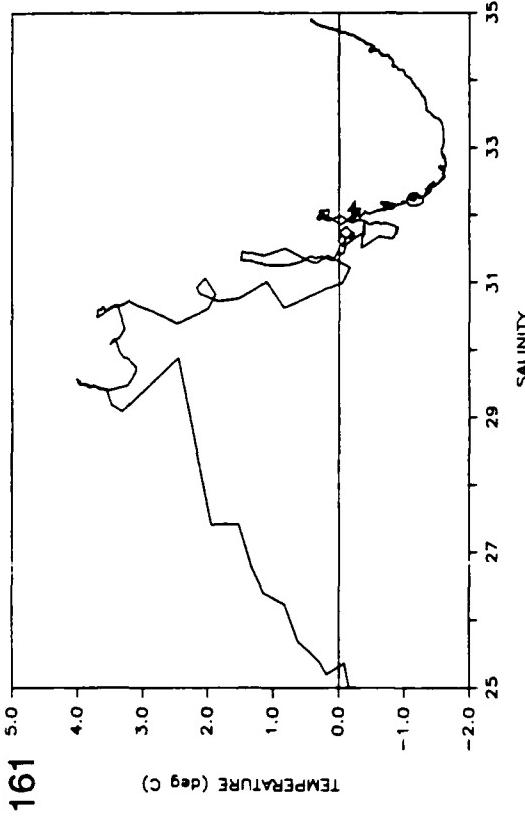
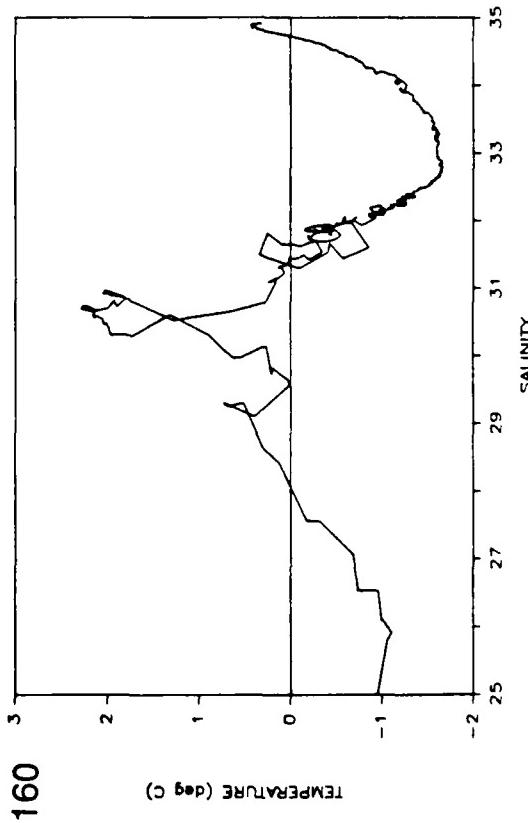
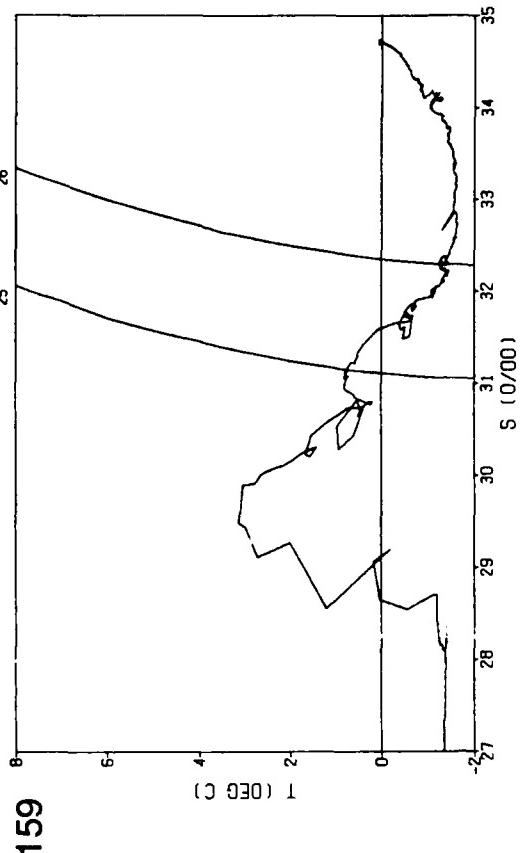
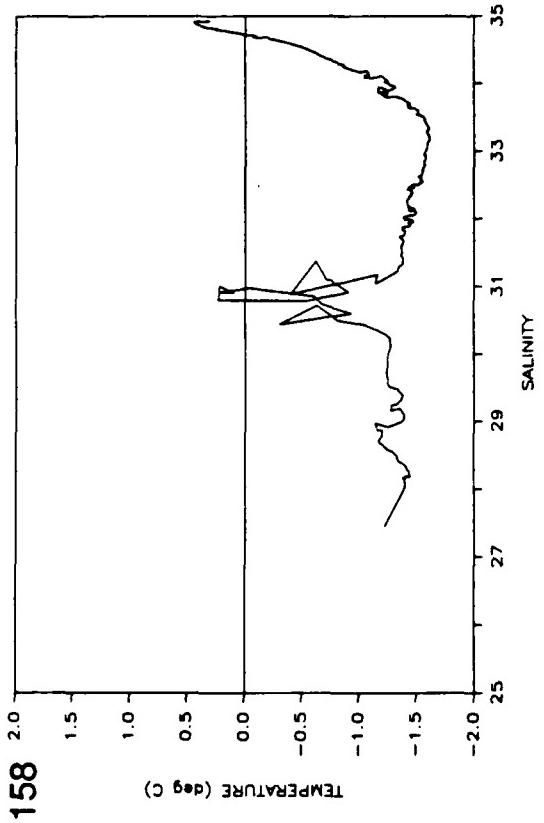
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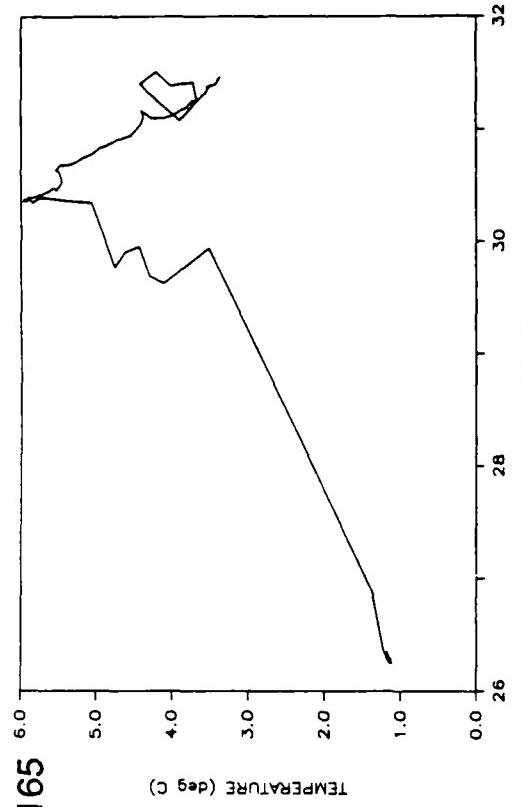
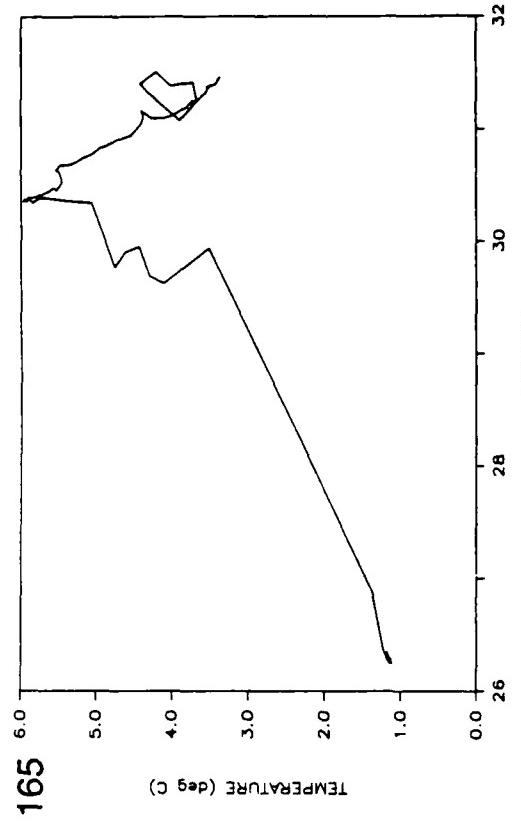
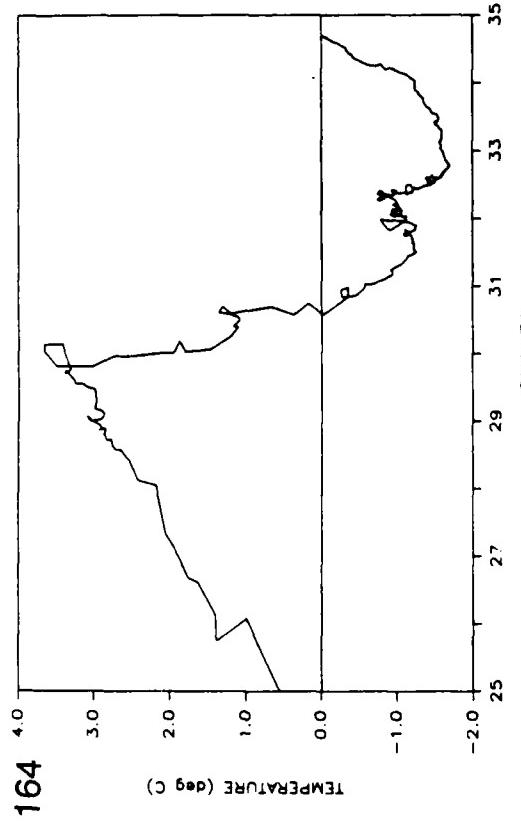
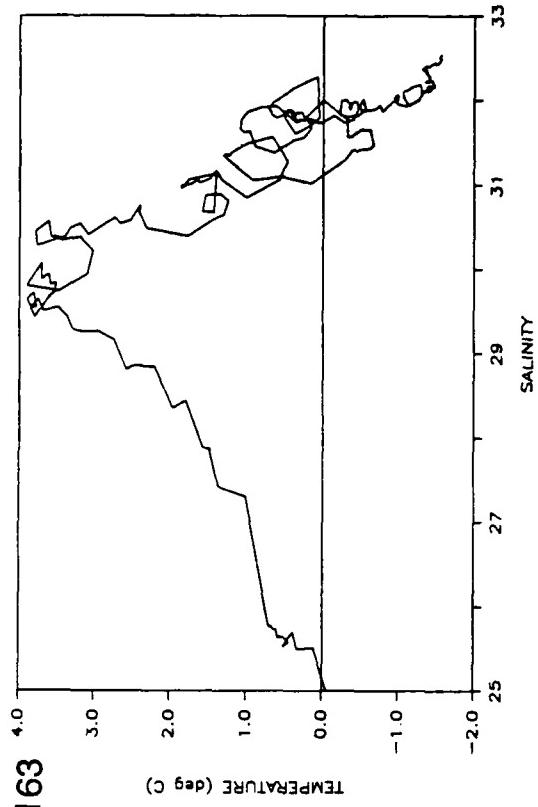
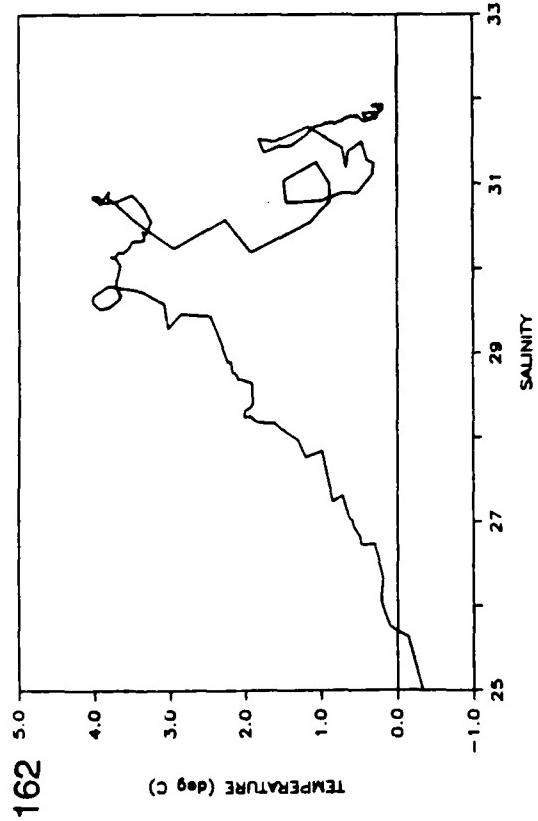
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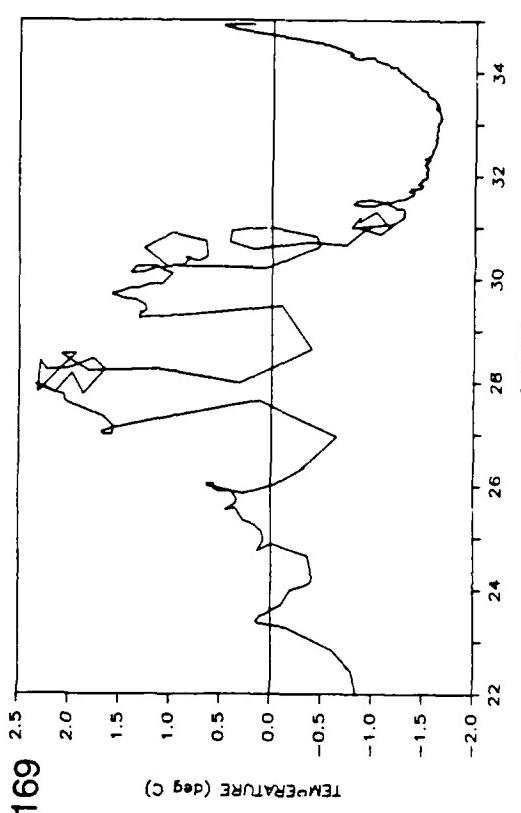
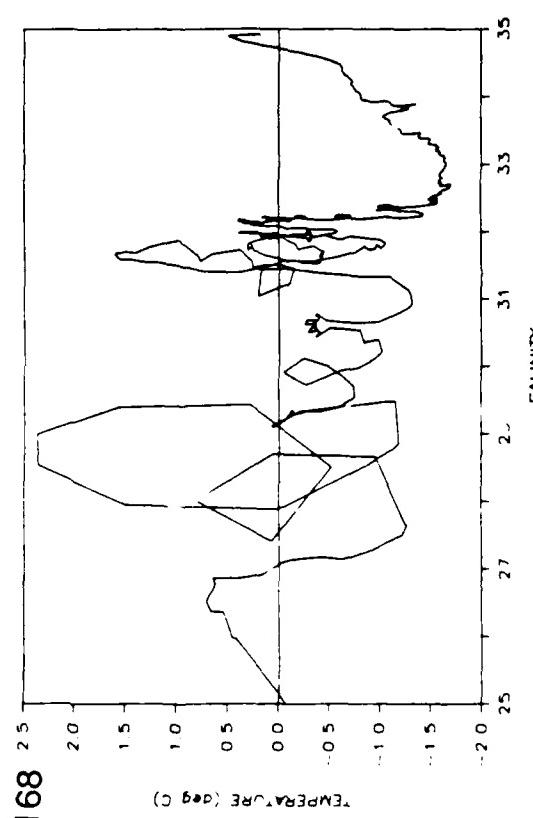
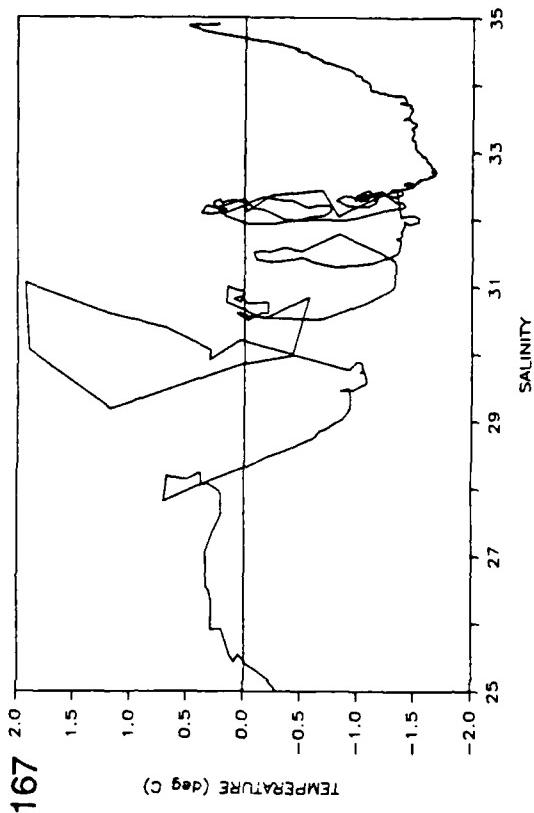
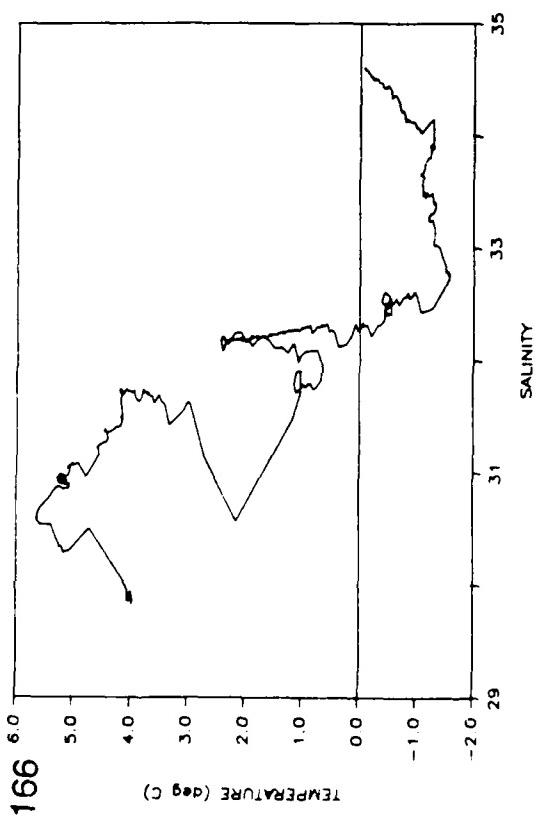
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158	X	X	251	0149	Ship	71 30.3	148 43.7
159			251	1140	Ship	71 29.6	150 2.7
160	X	X	251	1728	Ship	71 31.6	151 2.5
161	X		251	2036	Ship	71 31.2	151 35.3



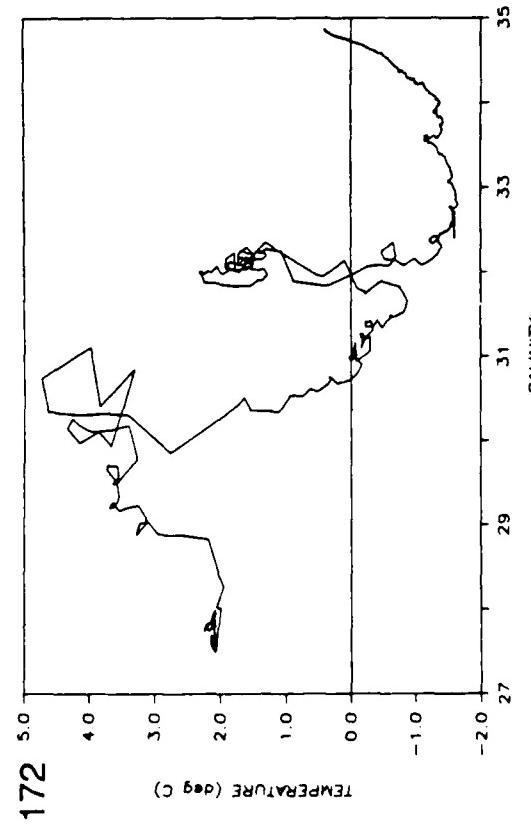
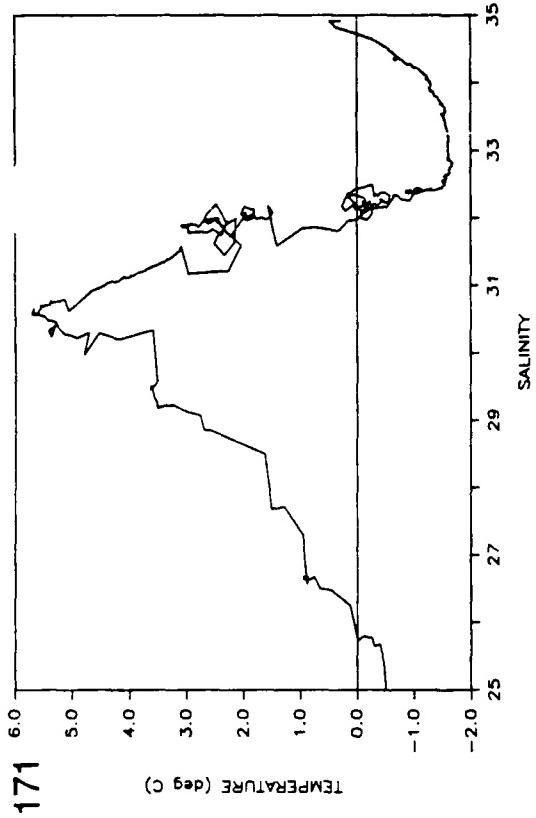
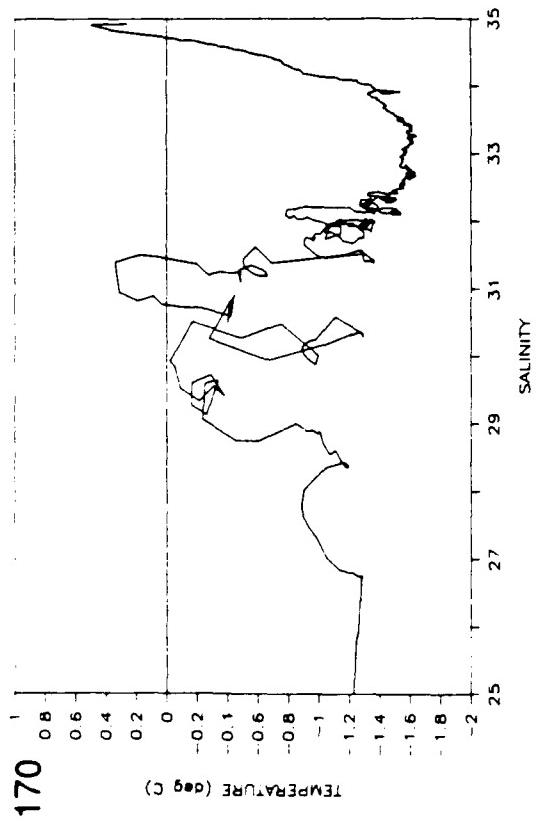
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162	X	252	0018	Ship	71 22.2	151 32.5	
163	X	252	0252	Ship	71 31.7	152 25.2	
164	X	252	0540	Ship	71 44.1	152 57.0	
165	X	252	0952	Ship	71 43.7	154 17.3	



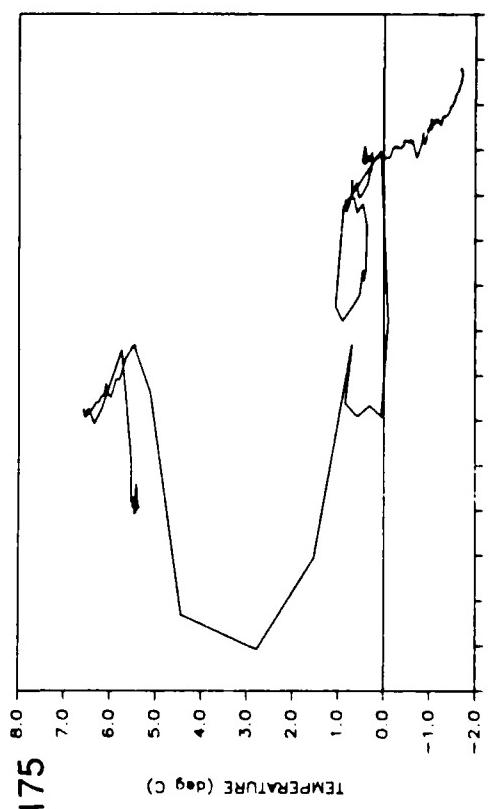
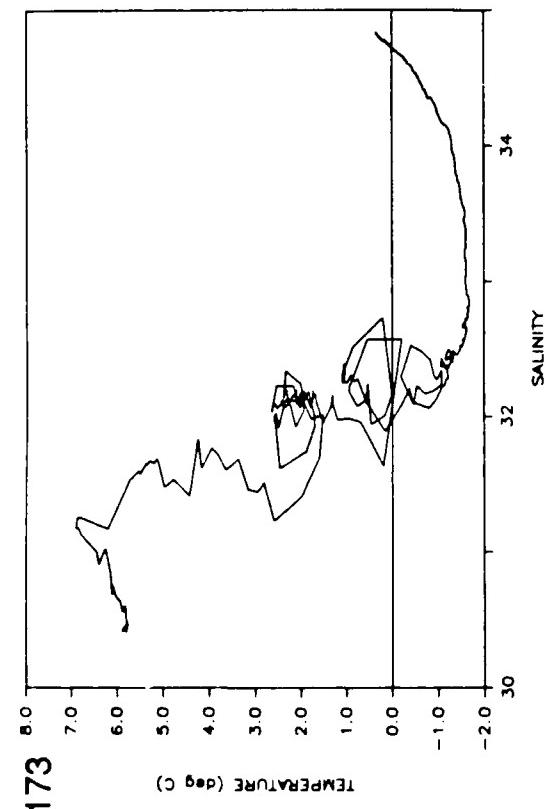
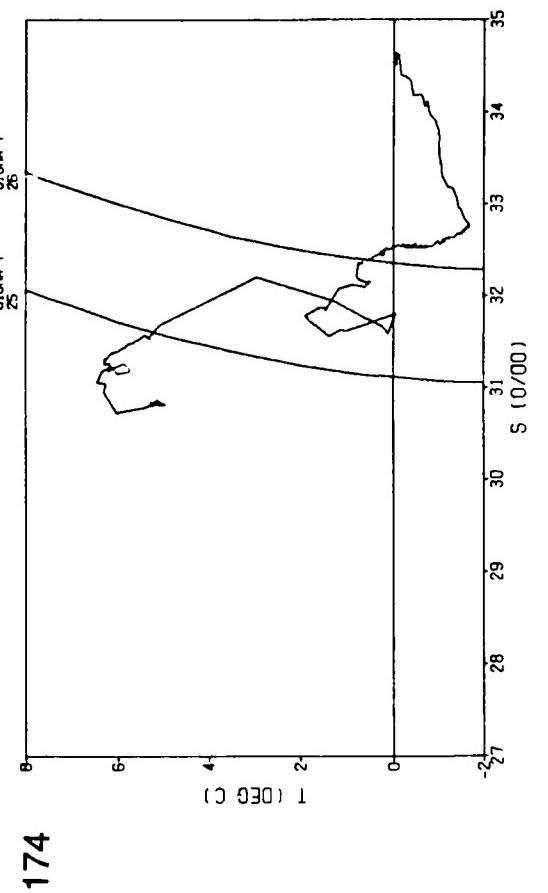
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167	X		253	0633	Ship	72 19.4	155 6.6
168	X		253	1122	Ship	72 39.8	154 58.0
169	X		253	1648	Ship	72 59.9	155 1.4



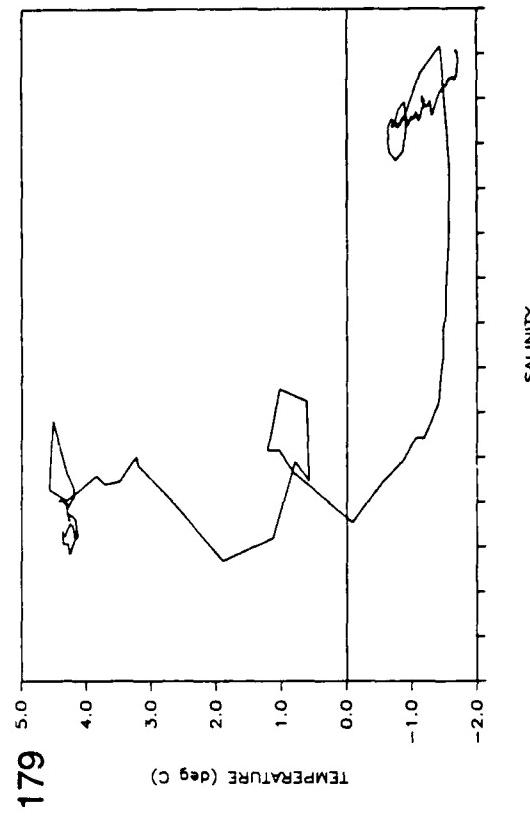
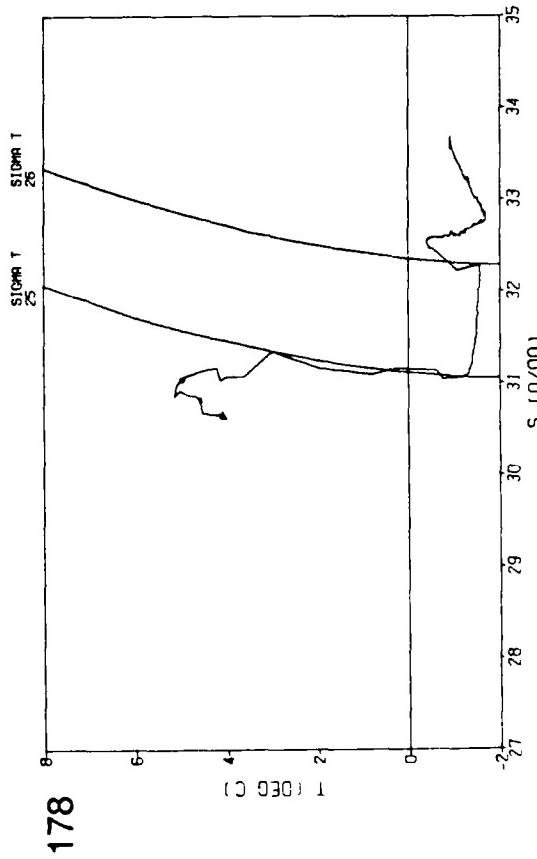
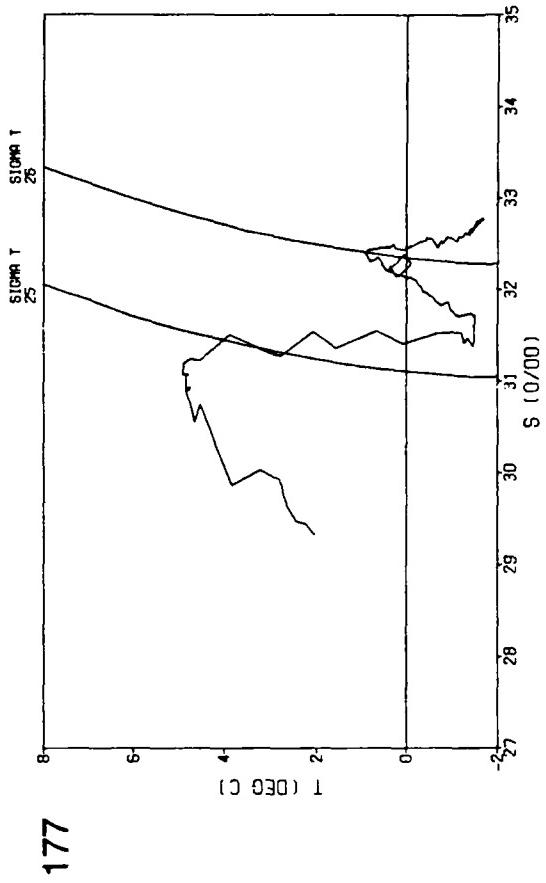
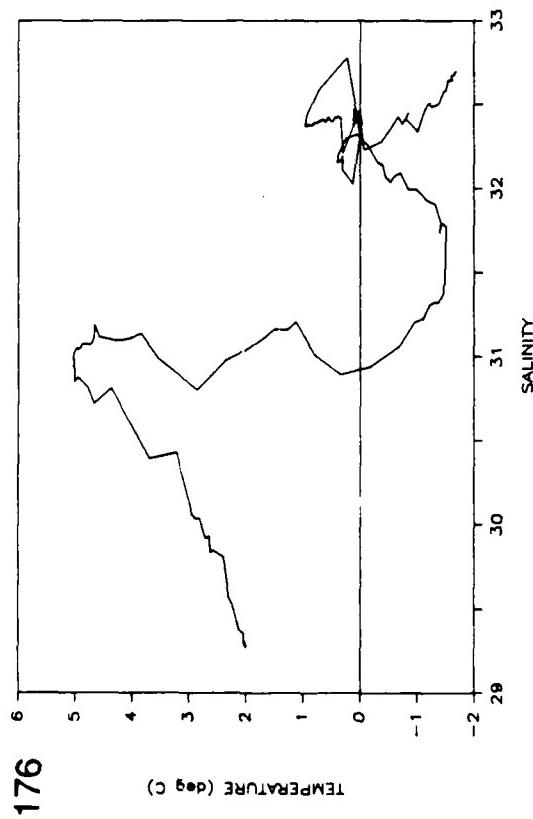
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170	X		253	2331	Ship	72 33.8	154 10.6
171	X		255	0233	Ship	72 11.6	154 43.0
172	X		255	0443	Ship	72 2.6	154 53.6



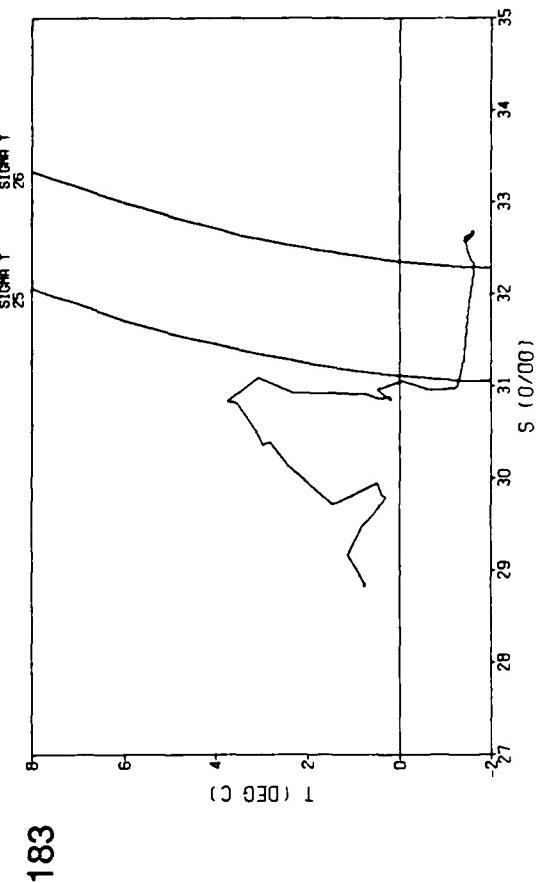
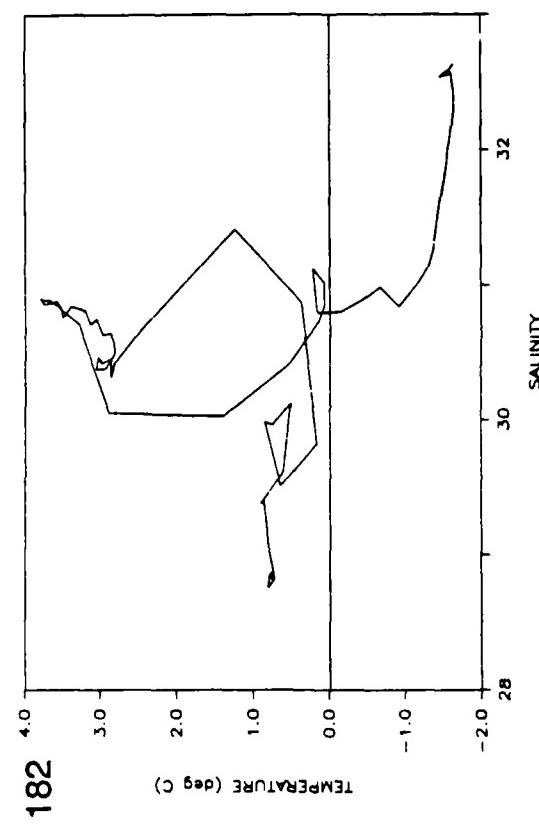
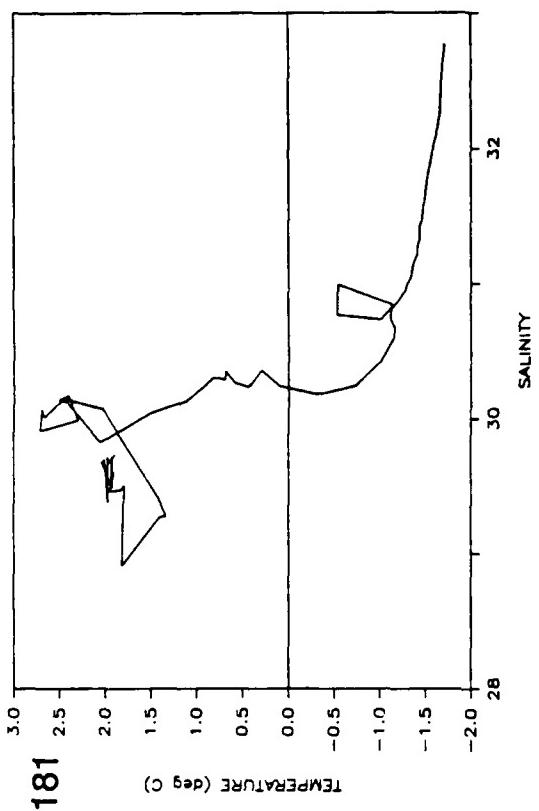
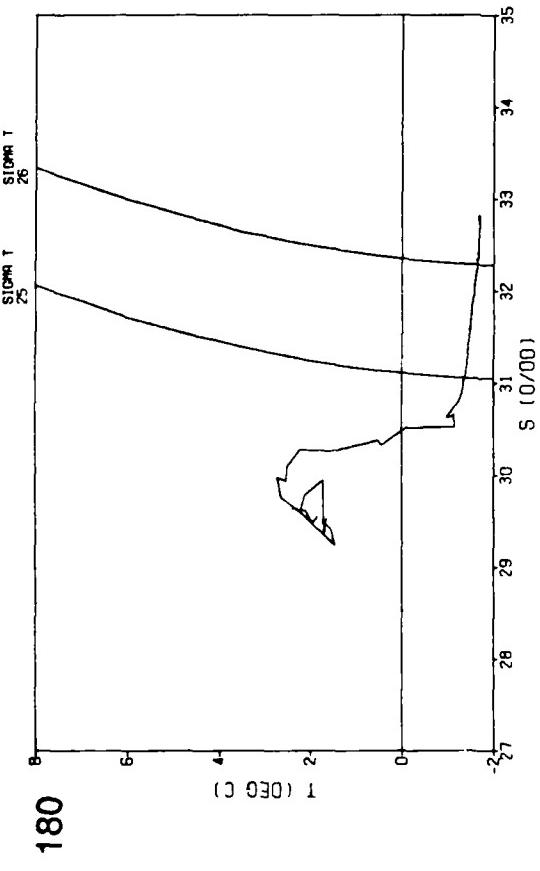
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175							



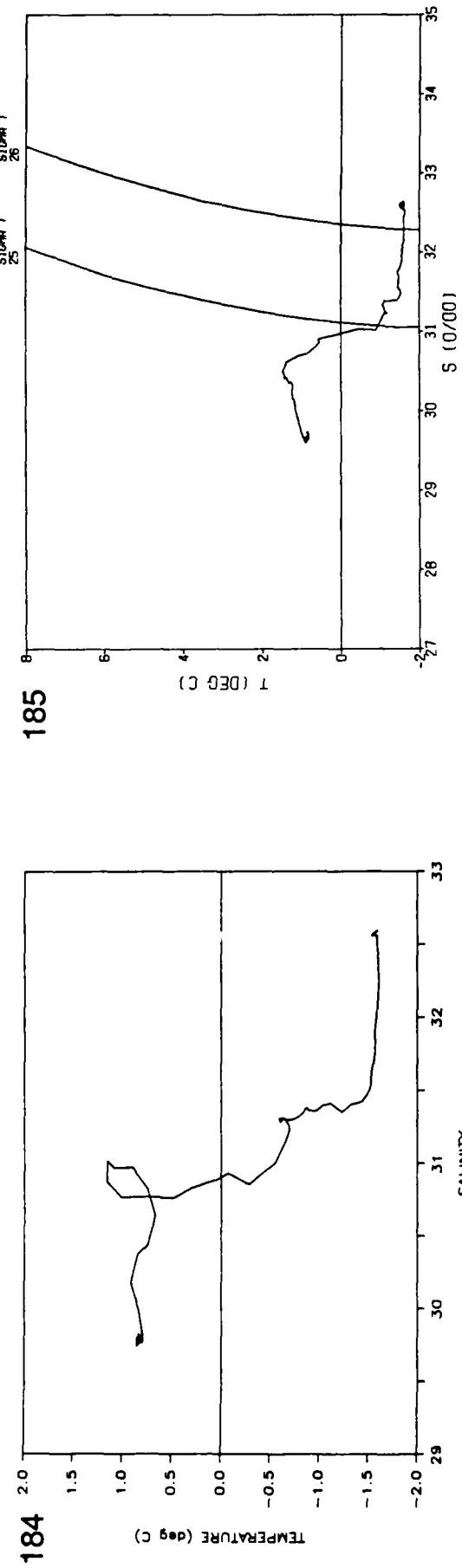
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177		X	255	1130	Ship	71 35.2	156 32.5
178		X					
179	X						



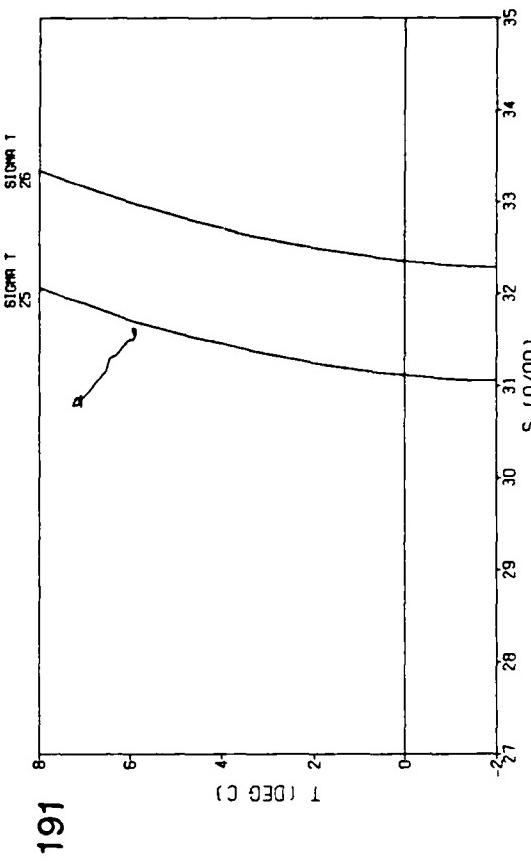
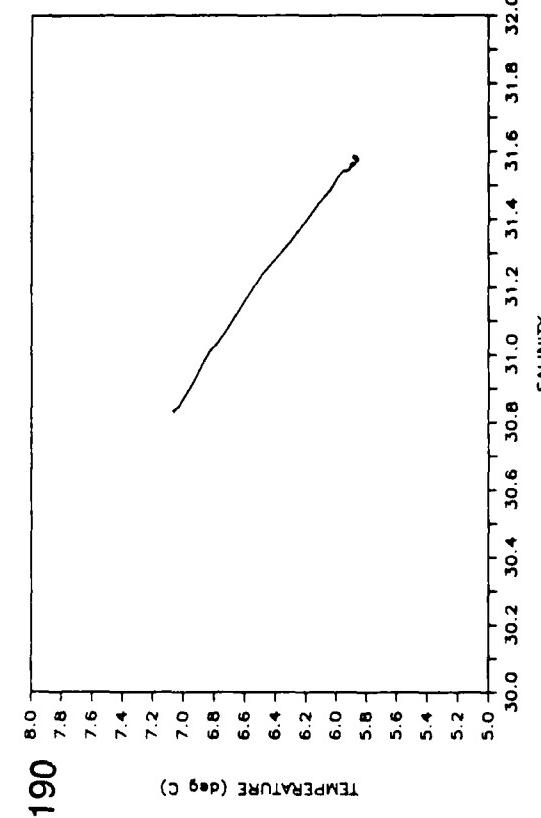
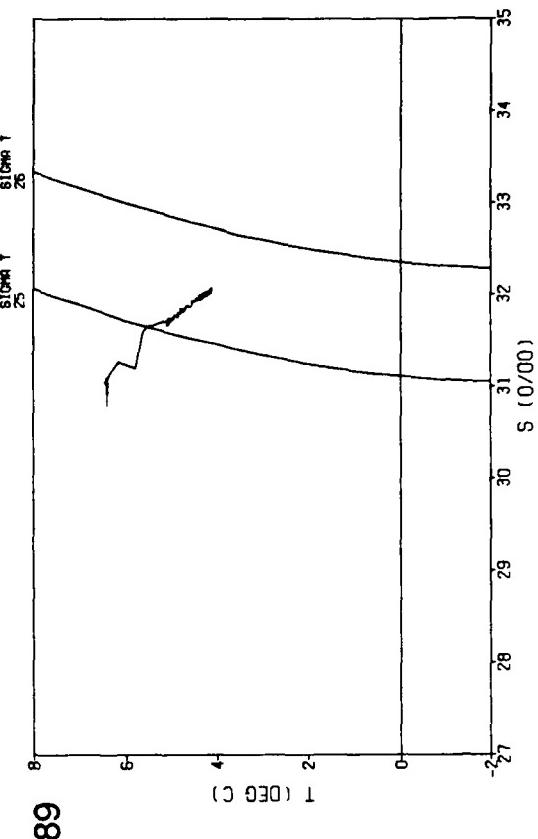
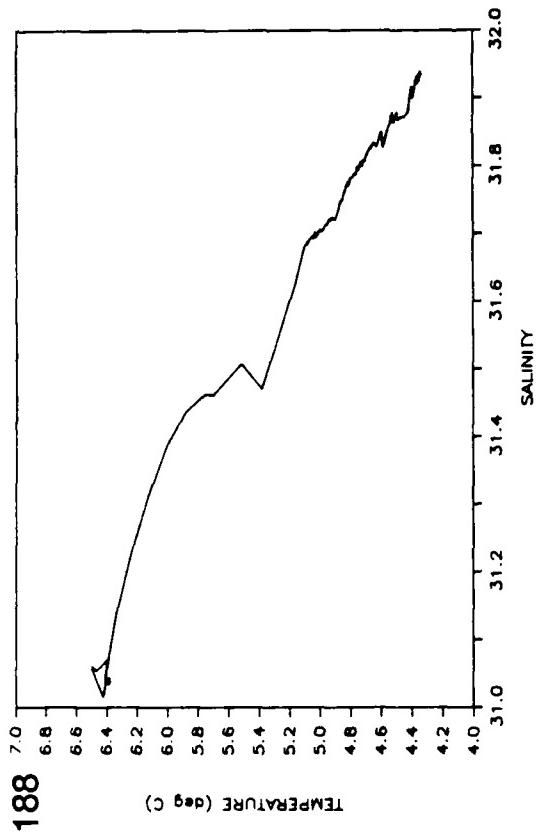
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181	X	X	255	1504	Ship	71 21.2	157 57.8
182							
183							



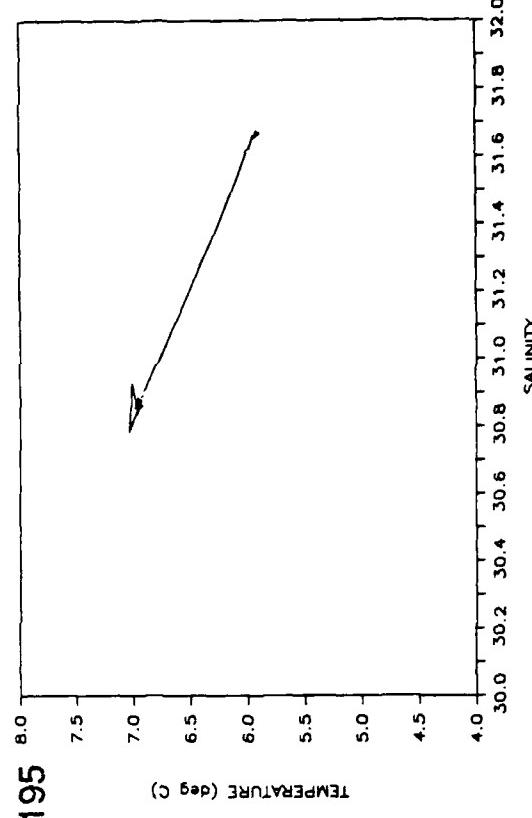
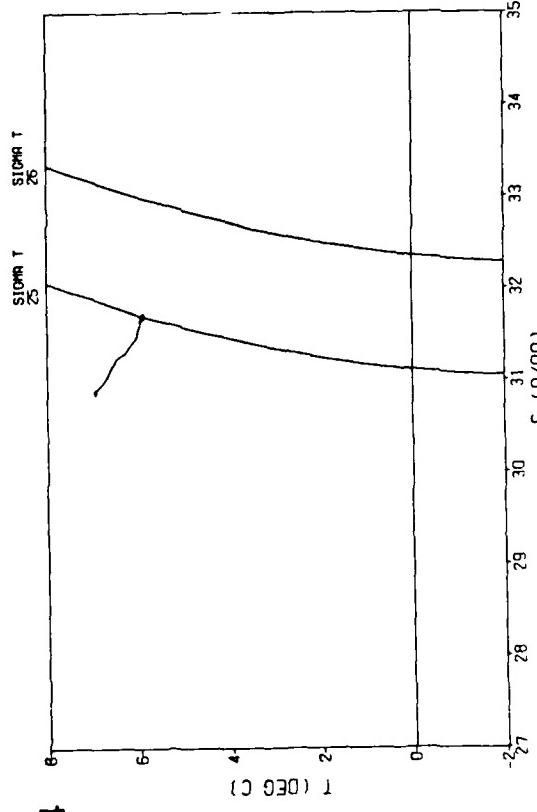
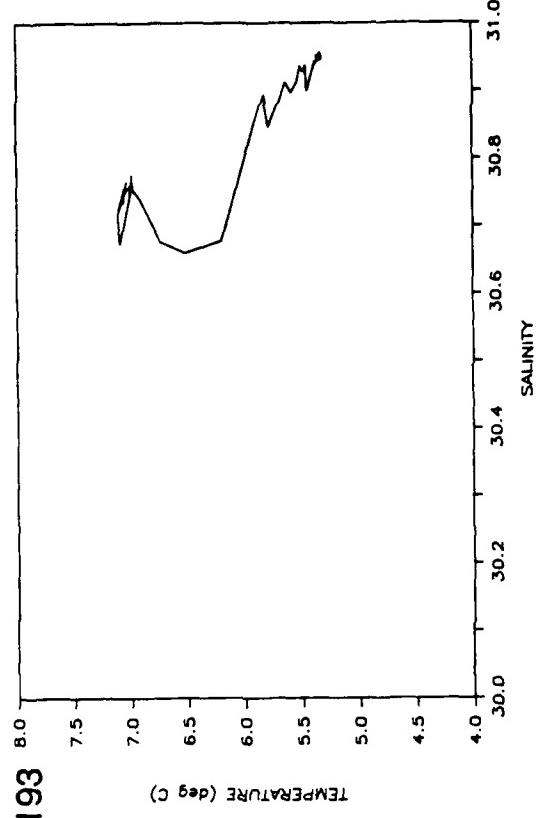
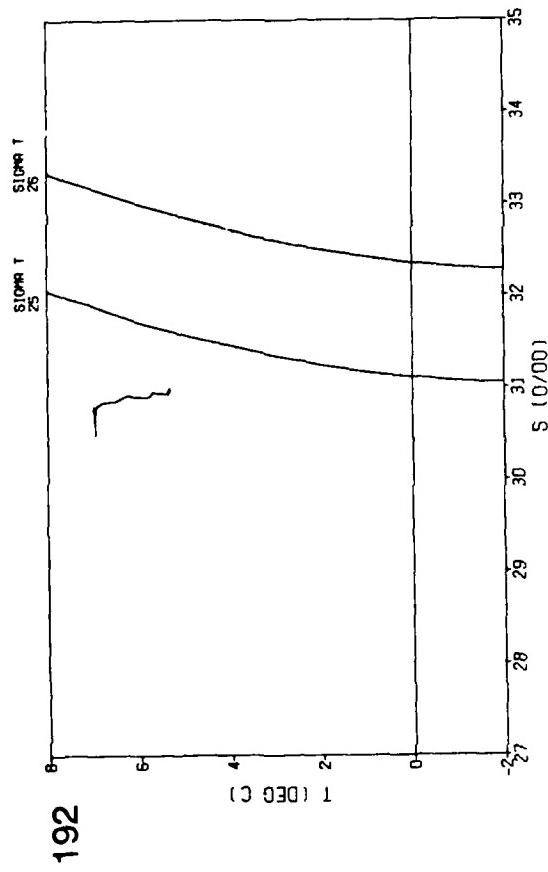
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184	X	X	255	1623	Ship	71 16.3	158 26.0
185	X	X	255	1852	Ship	71 6.5	159 17.9
186							
187							



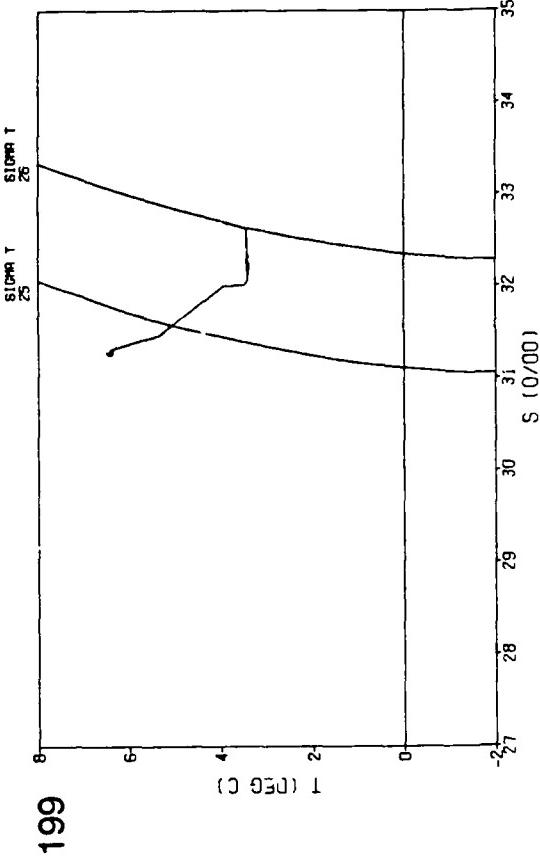
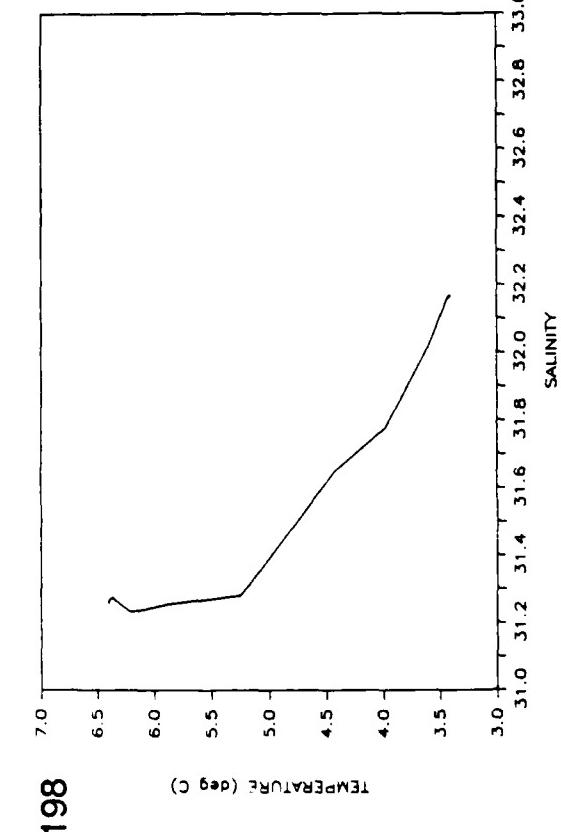
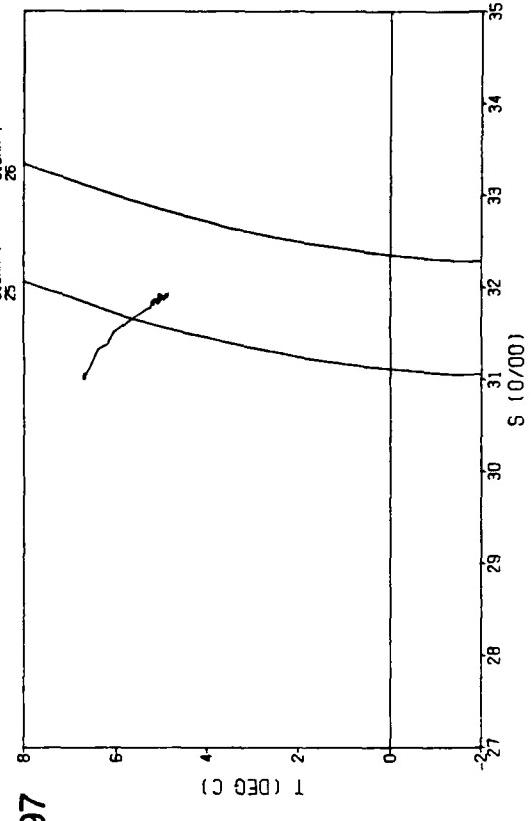
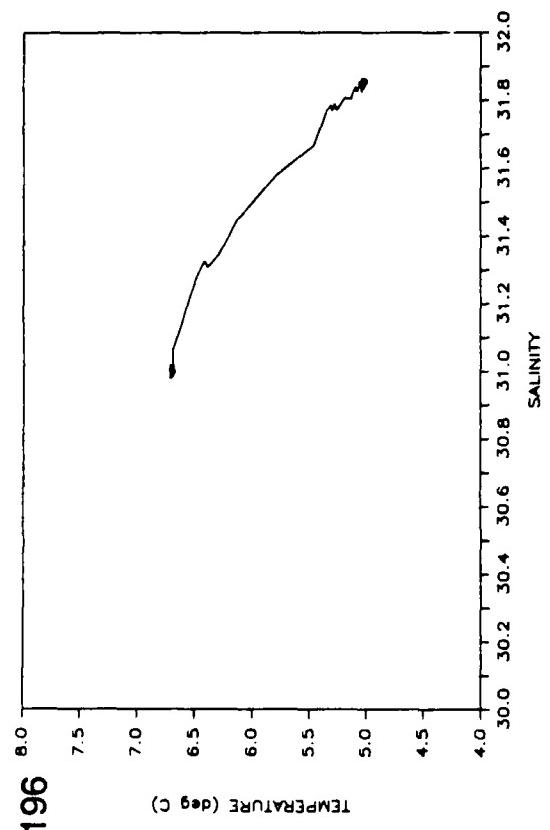
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188	X	X	255	2026	Ship	71 1.3	159 47.3
189	X	X	255	2232	Ship	70 51.0	160 35.6
190							
191							



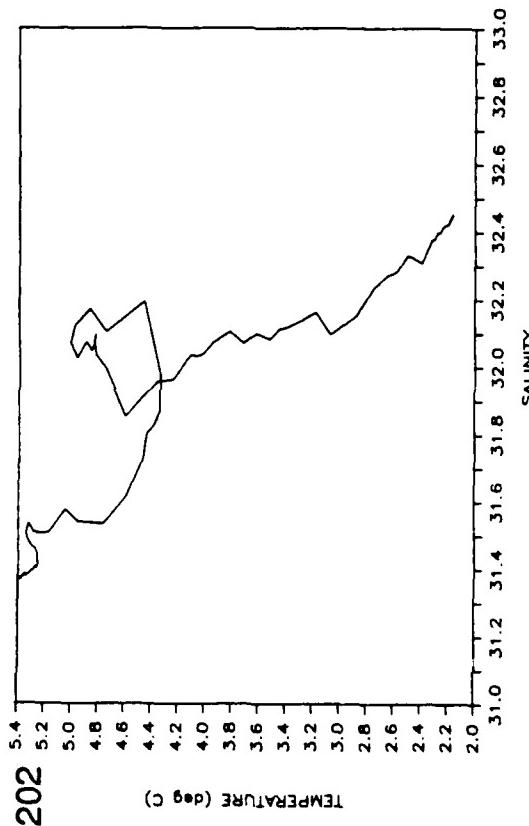
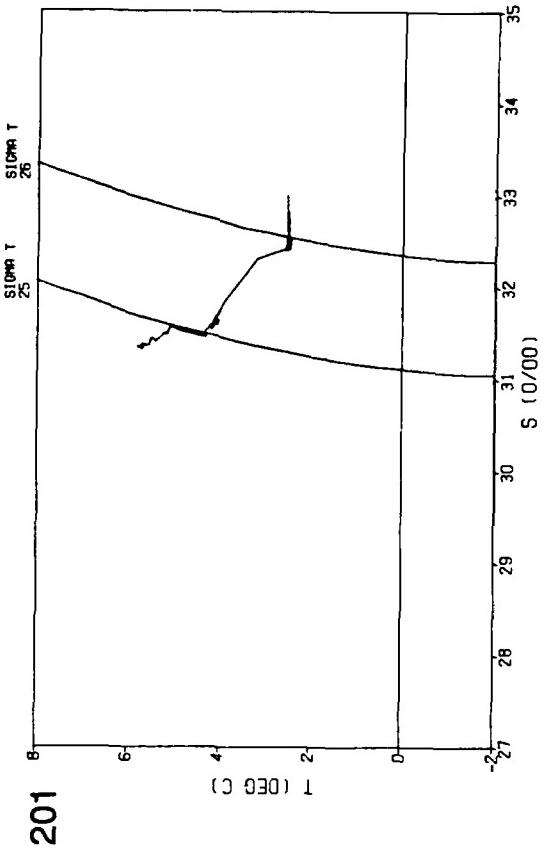
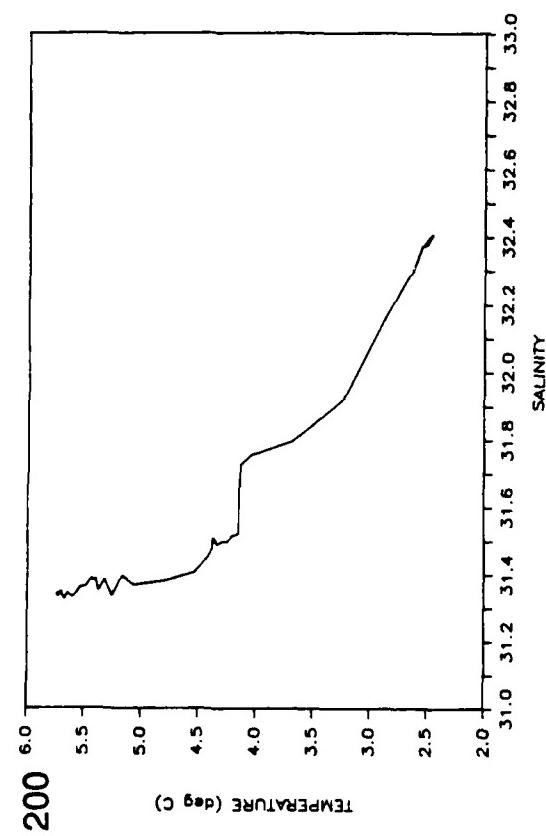
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192	X	X	256	0205	Ship	70 49.0	160 14.3
193	X	X	256	0309	Ship	70 54.6	160 20.7
194	X						
195	X						



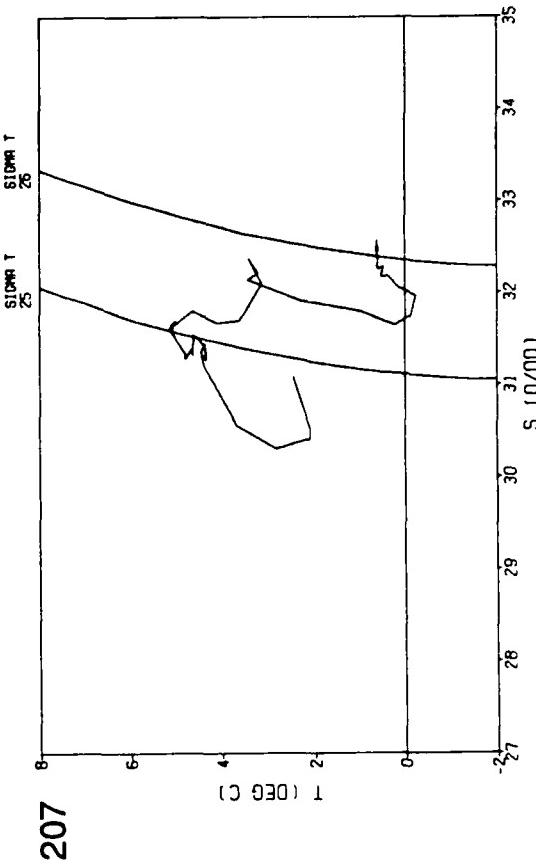
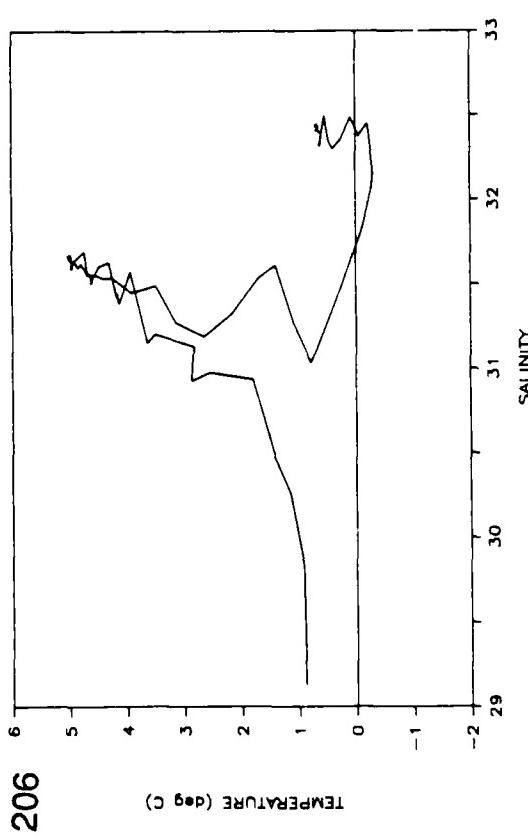
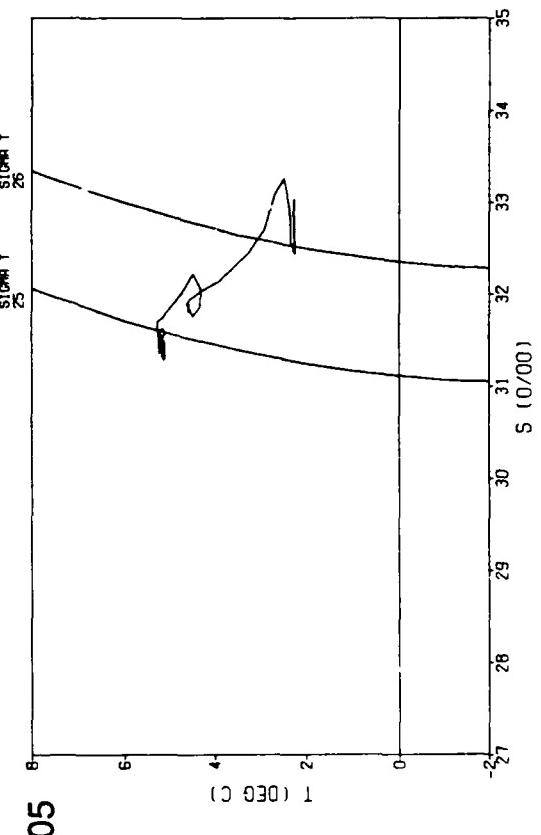
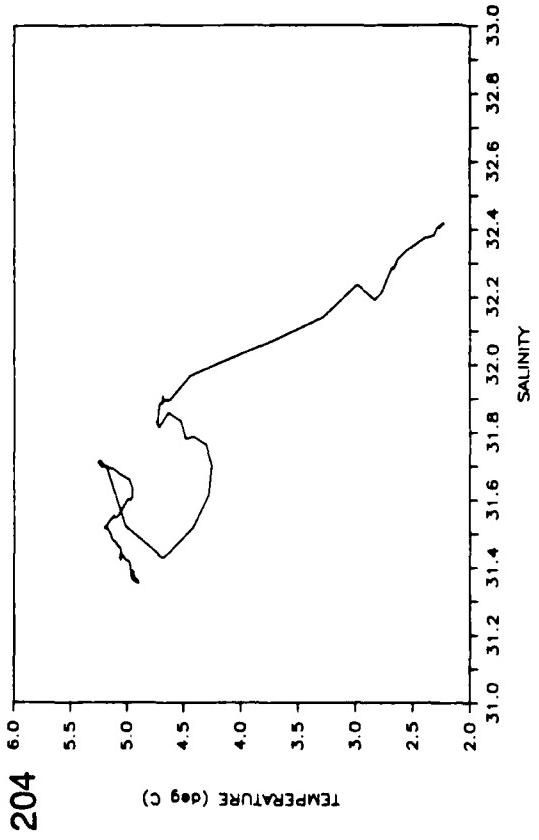
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197							
198	X	X	256	0421	Ship	71 0.5	160 26.8
199							



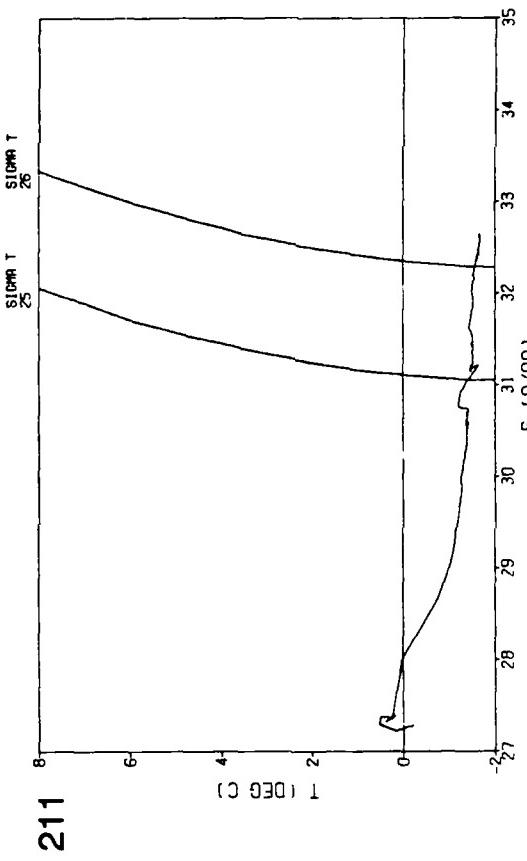
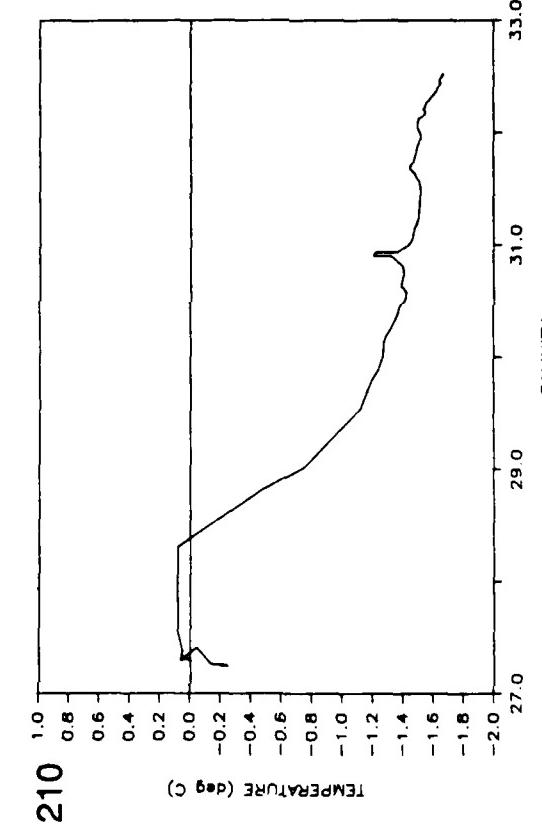
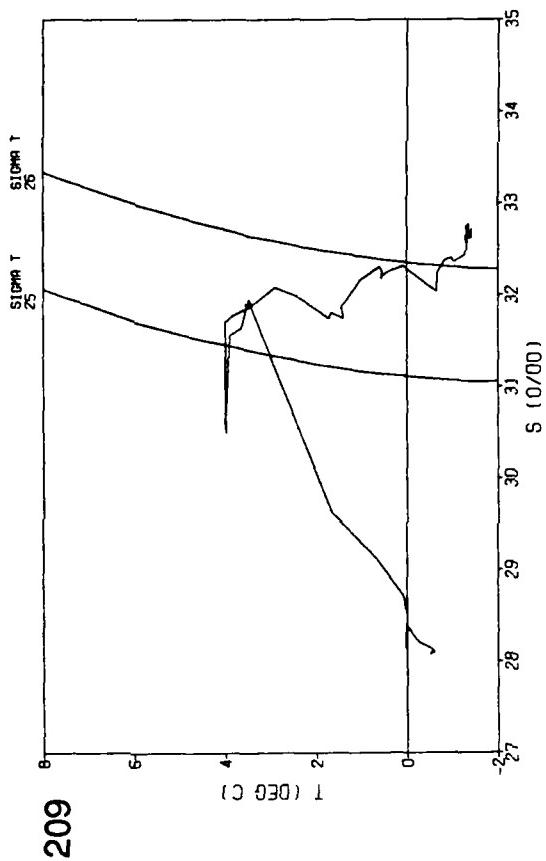
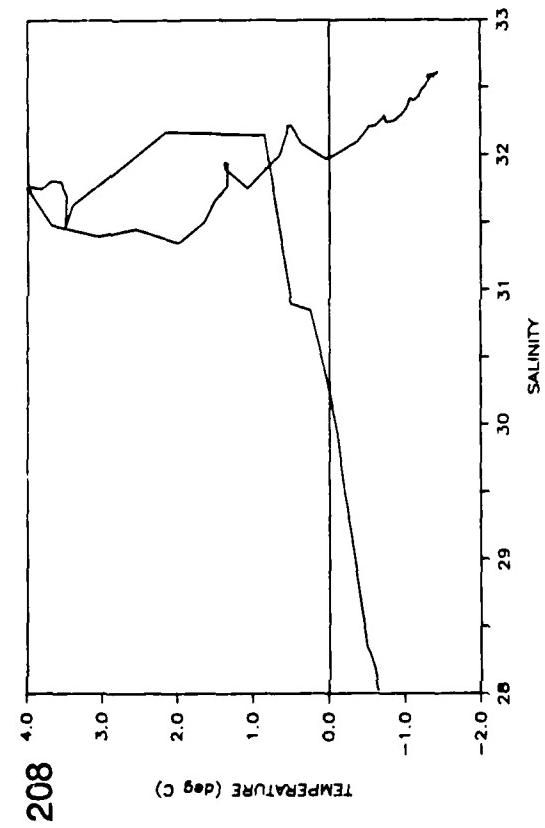
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200	X		256	0455	Ship	71 4.1	160 28.2
201		X	256	0527	Ship	71 6.1	160 33.8
202	X						



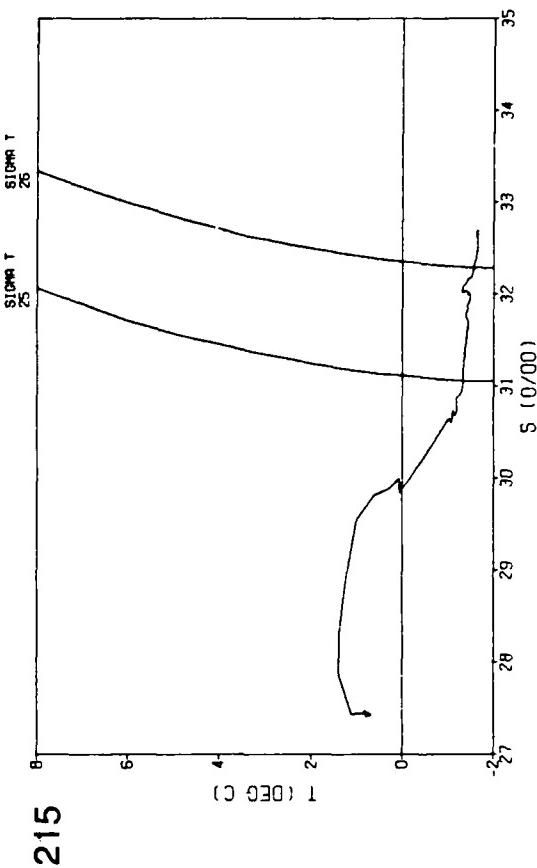
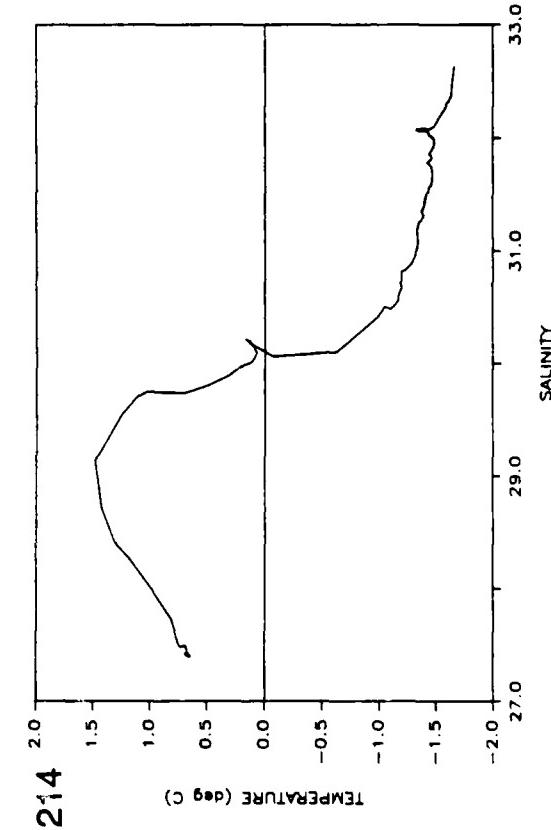
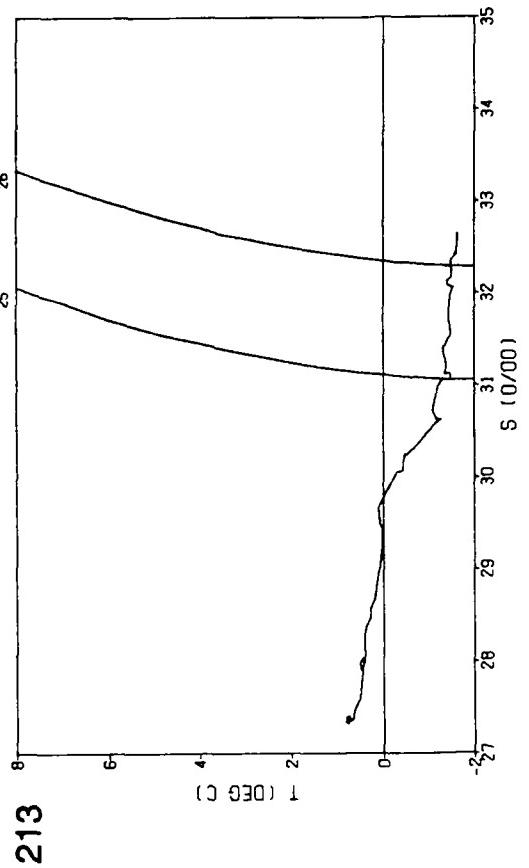
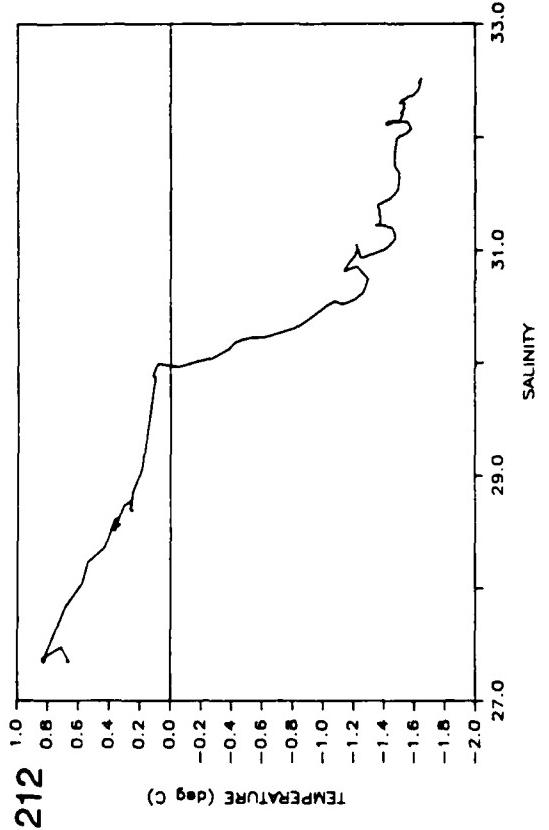
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204	X		256	0559	Ship	71 8.9	160 37.1
205	X	X	256	0630	Ship	71 11.6	160 40.1
206							
207							



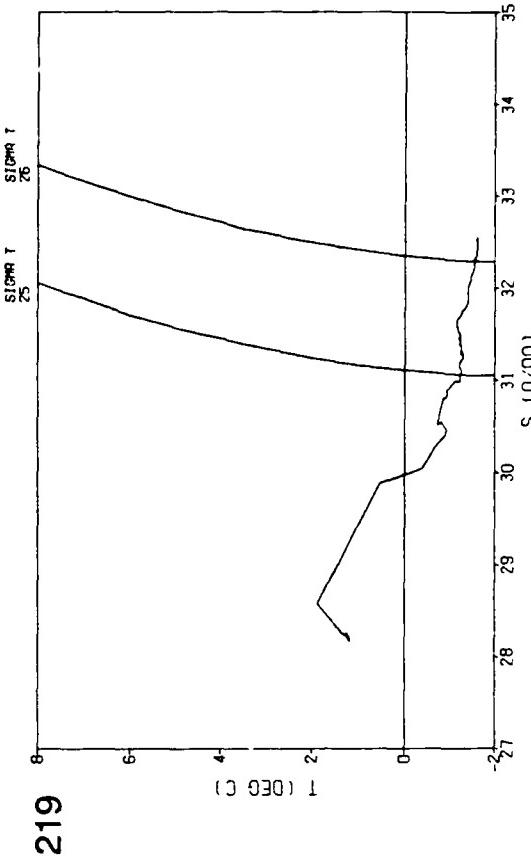
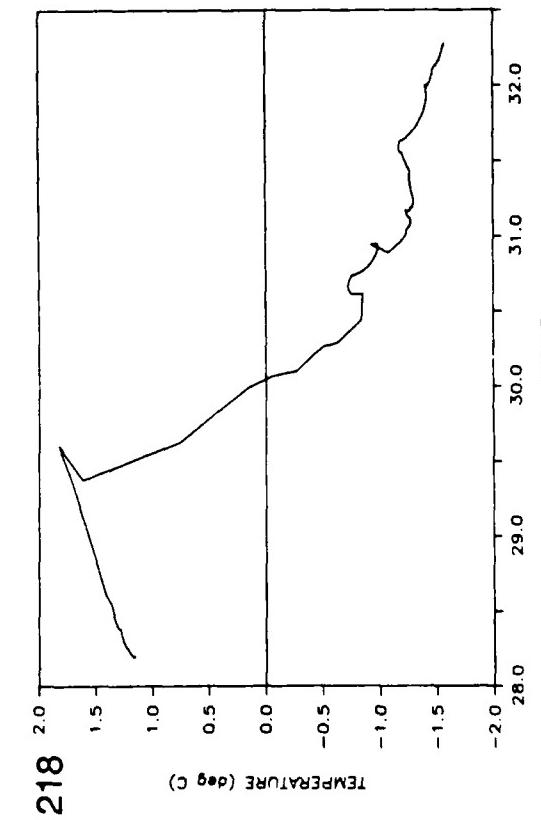
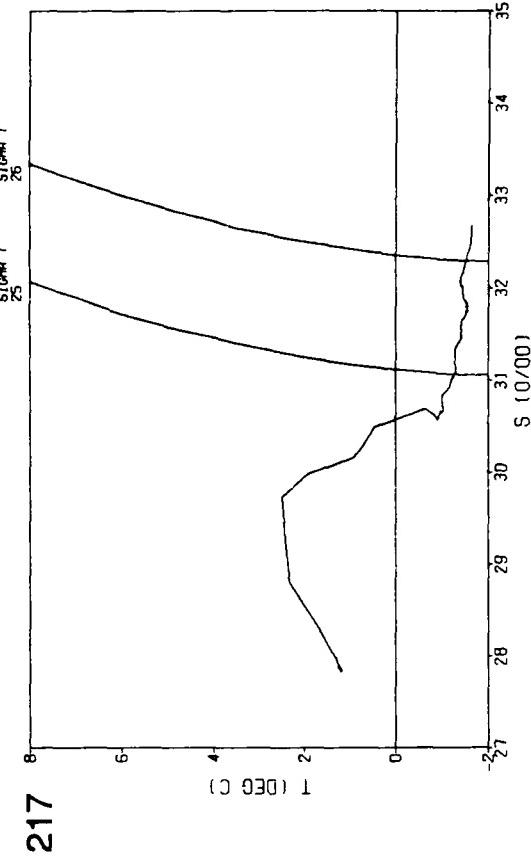
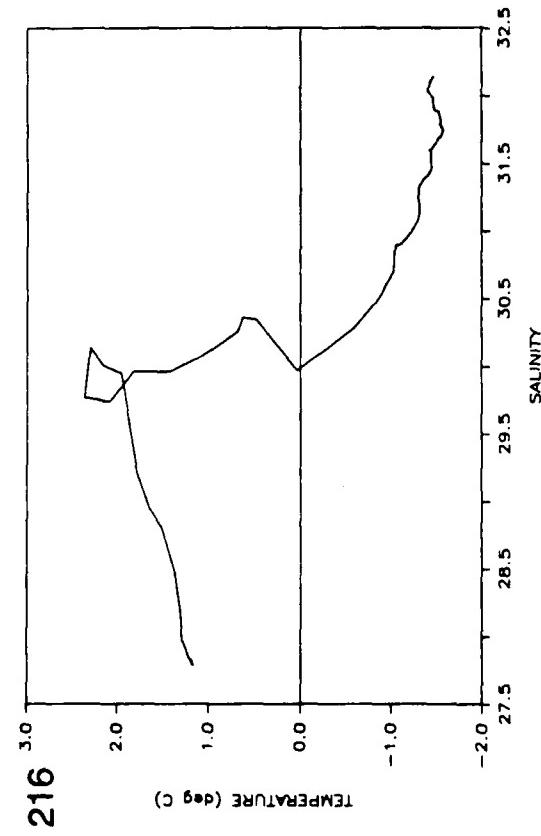
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208	X		256	0713	Helo	71 16.7	160 42.8
209	X	X	256	1447	Helo	71 36.9	159 7.3
210							
211	X	X					



Station Number	ASL Cast	APL Cast	Julian Day	GMT h:m:m	Platform	Latitude	Longitude
212	X	X	256	1555	Ship	71 31.5	159 2.2
213							
214	X	X	256	1647	Ship	71 28.1	158 59.5
215							



Station Number	ASL Cast	APL Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
216	X		256	1723	Ship	71 25.1	158 56.2
217	X	X	256	1803	Ship	71 22.3	158 52.9
218	X	X					
219	X	X					



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CORSTAL OCEANOGRAPHY IN THE BEAUFORT SEA SUMMER 1985

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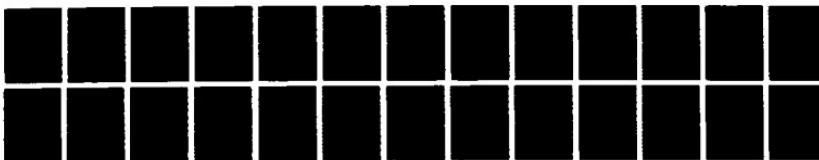
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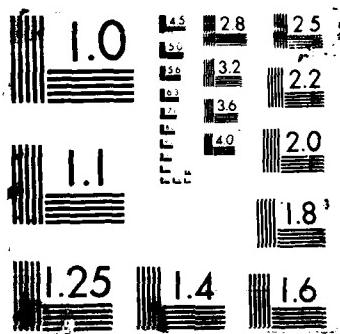
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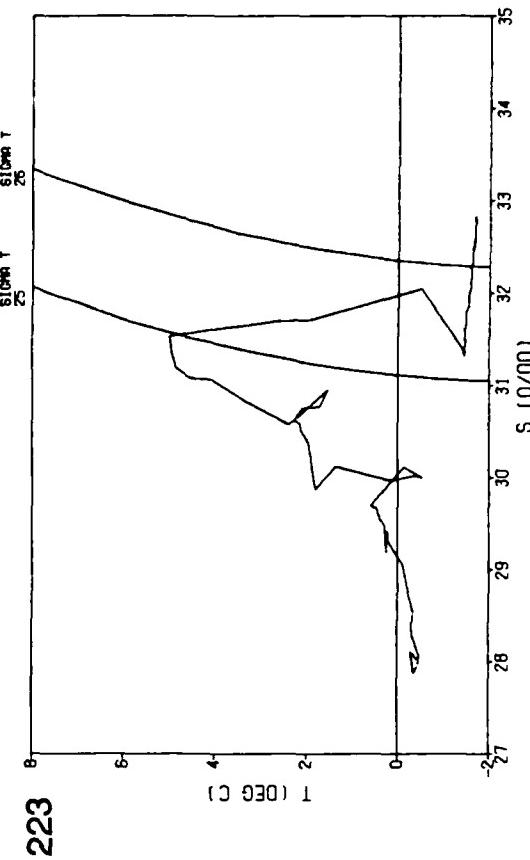
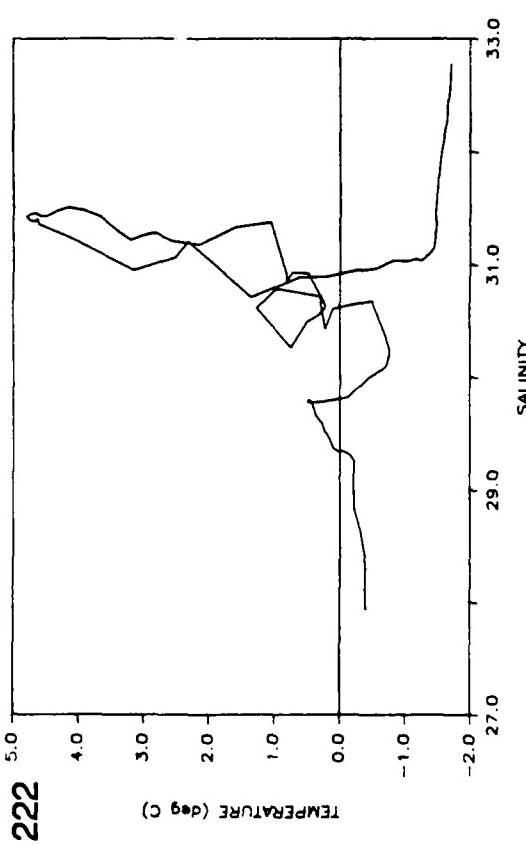
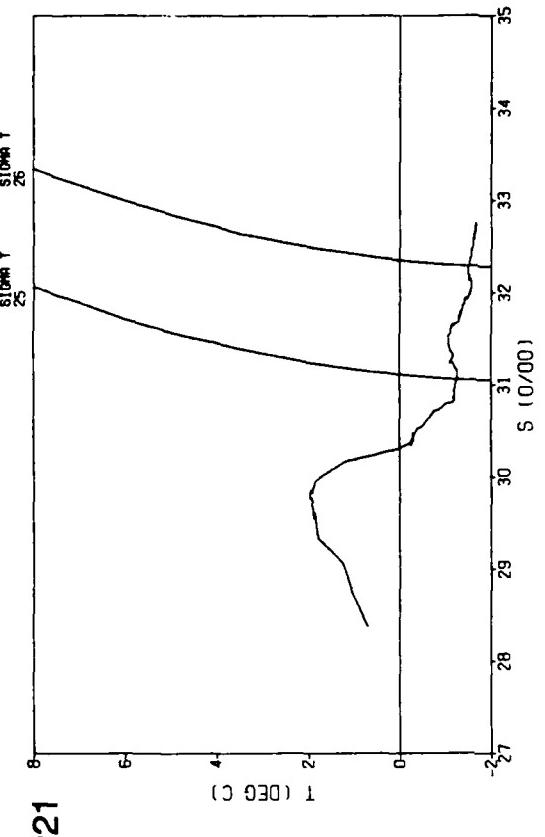
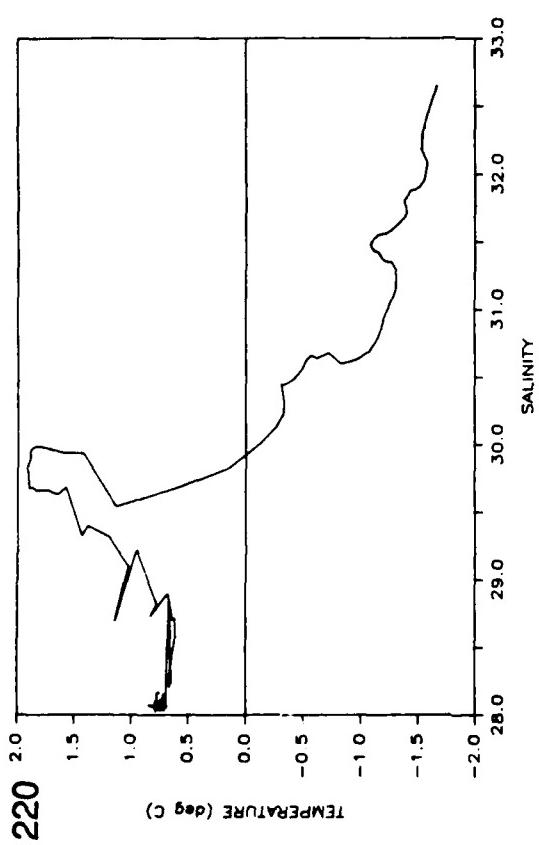
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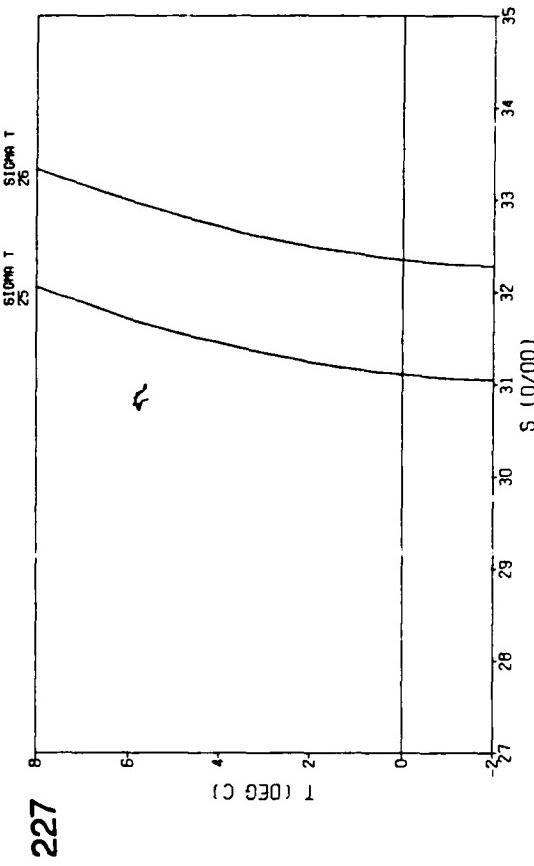
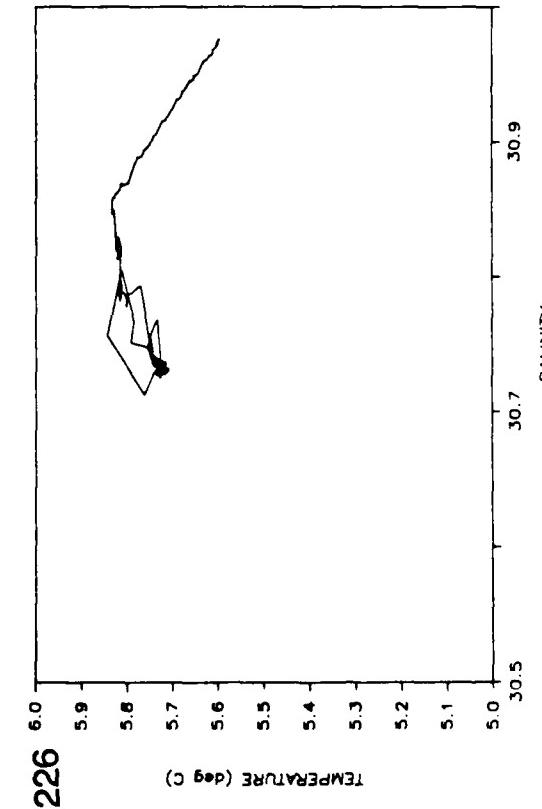
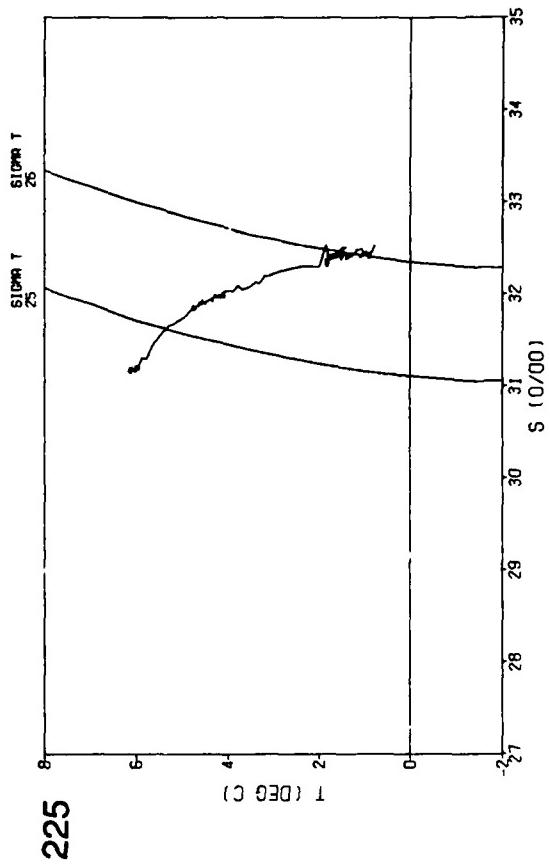
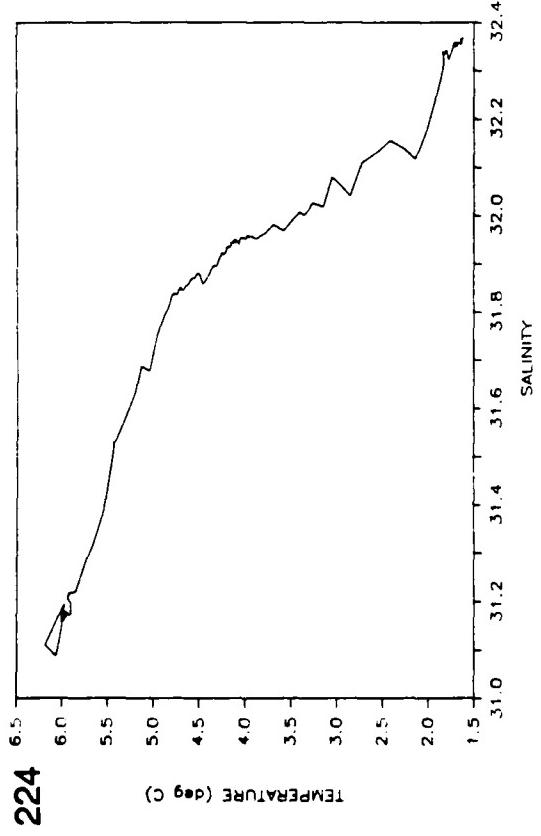




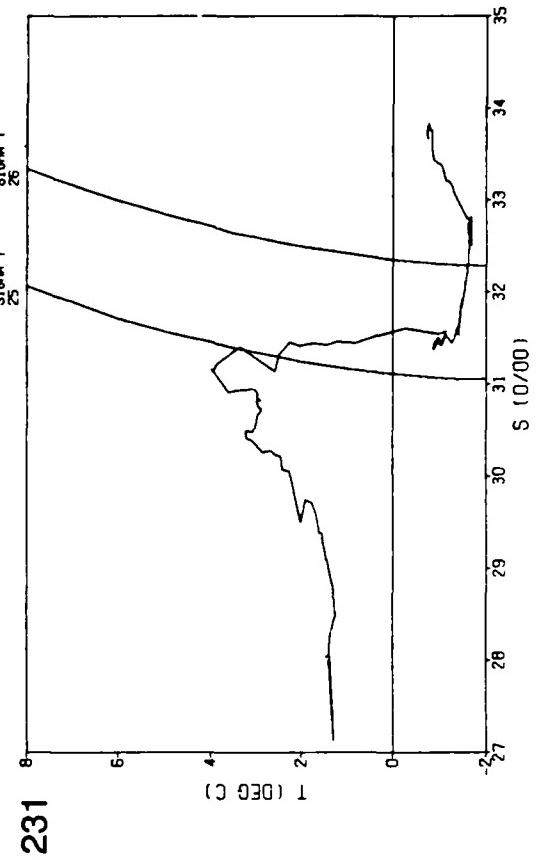
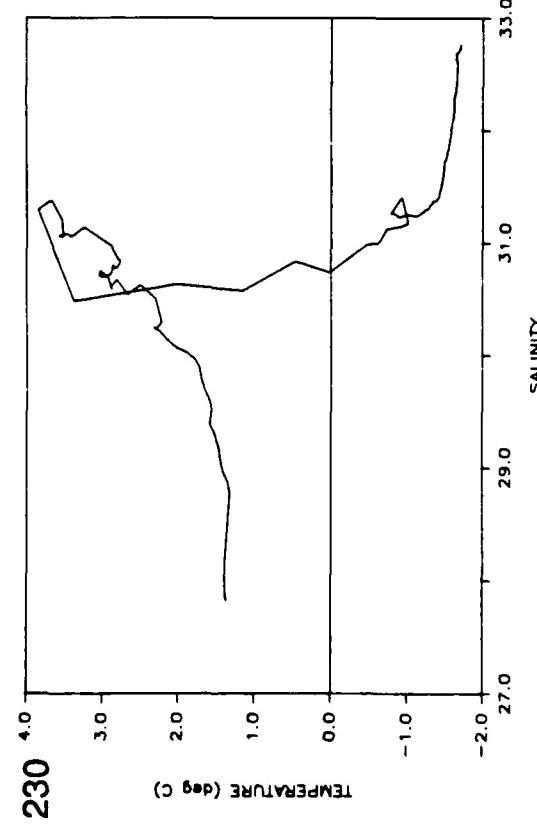
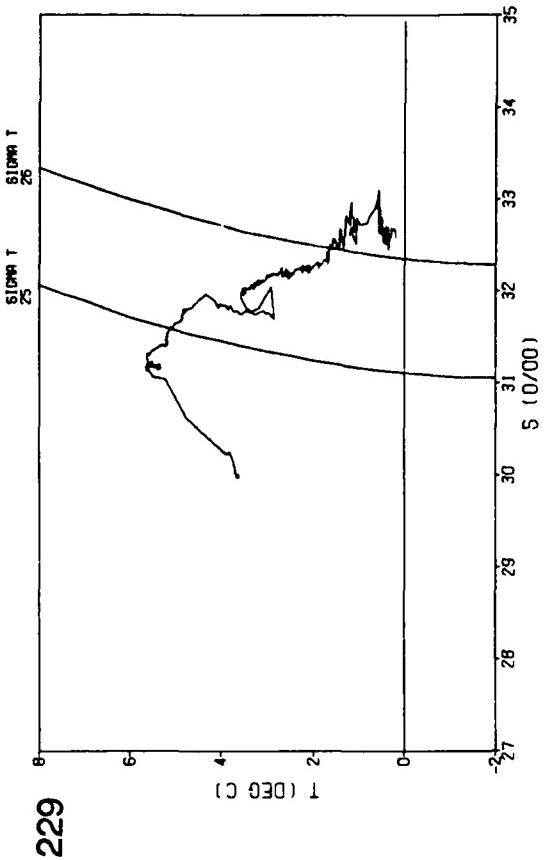
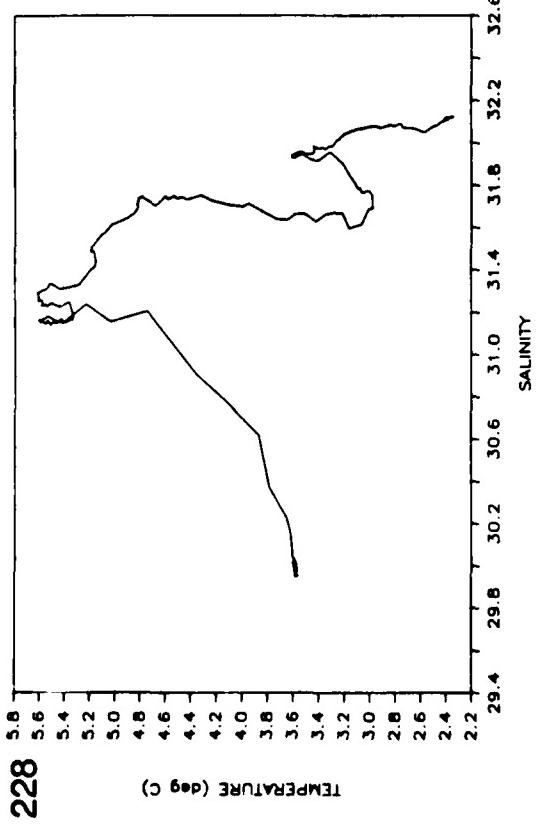
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221	X	X	256	1922	Ship	71 16.5	158 45.2
222							
223							



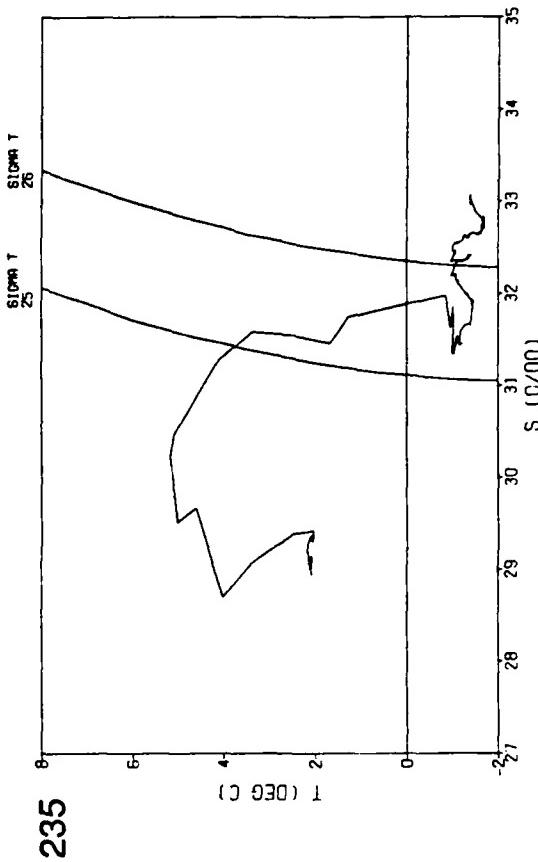
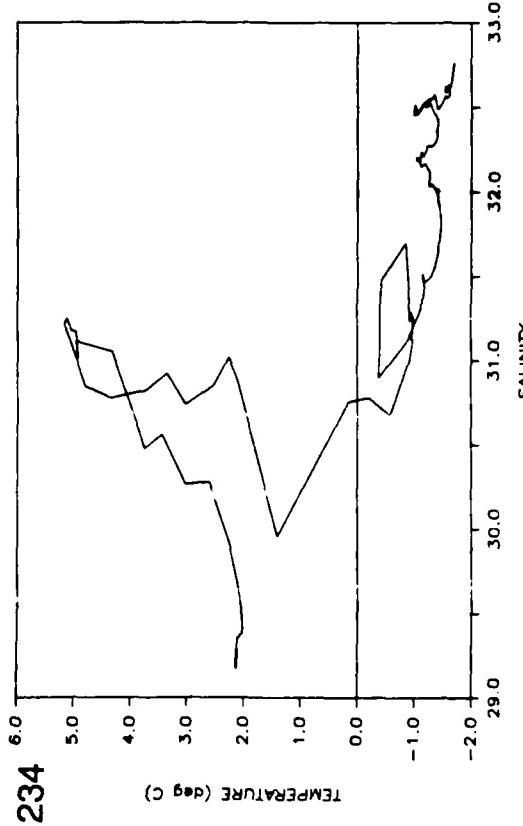
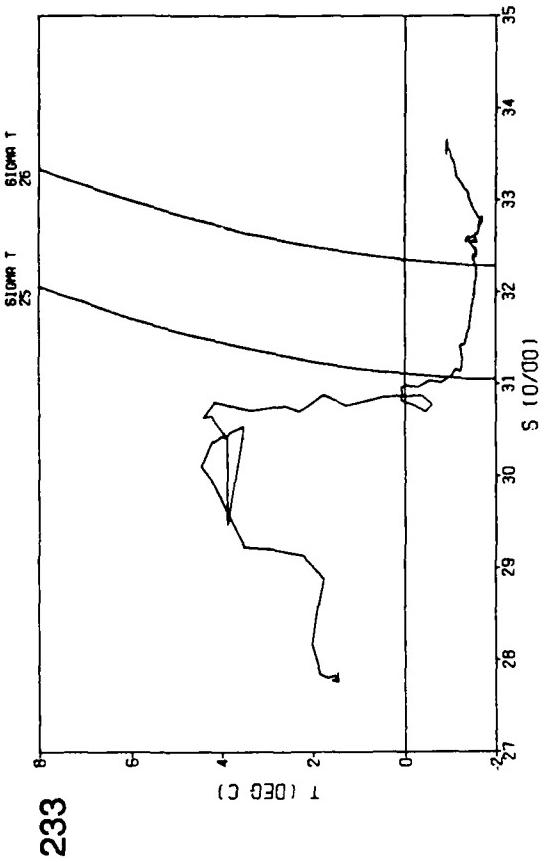
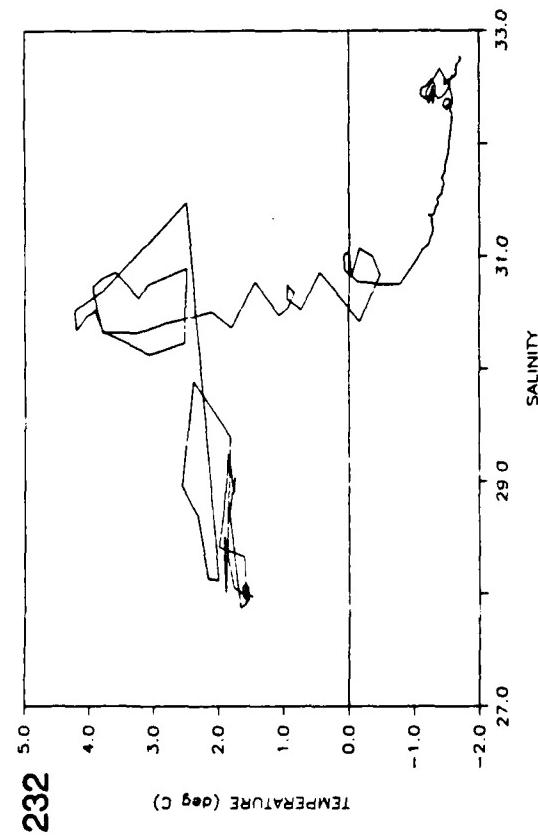
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225	X	X	256	2131	Ship	71 8.8	158 38.2
226							
227							



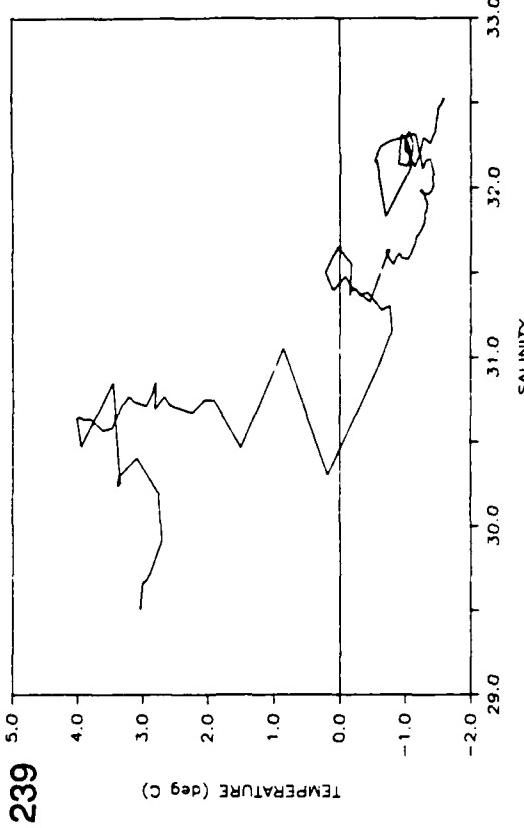
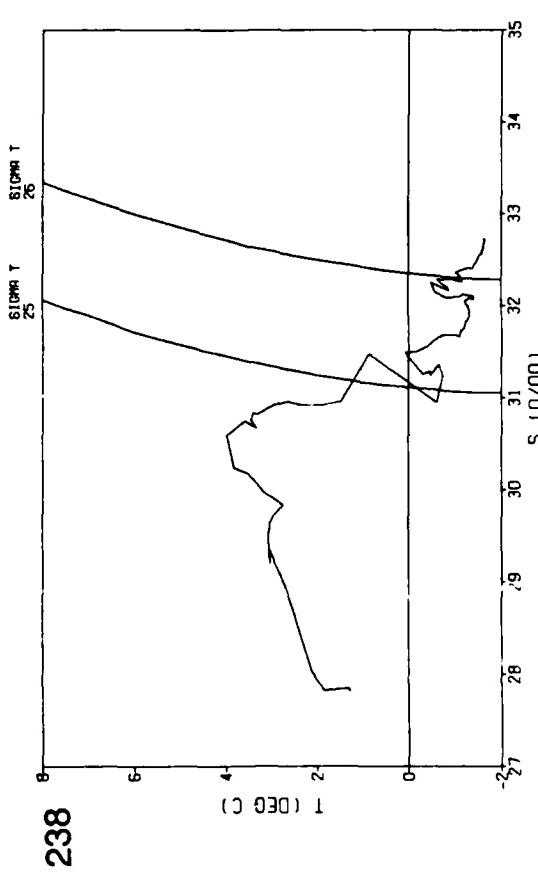
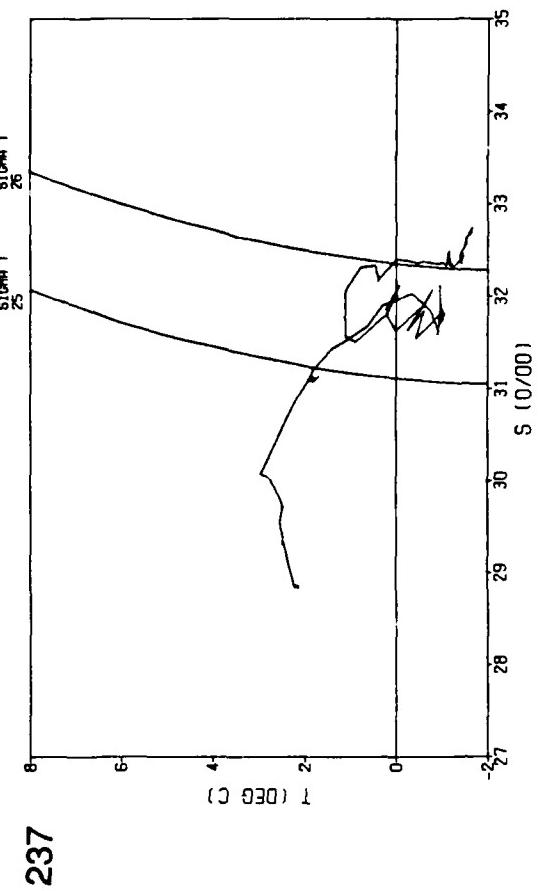
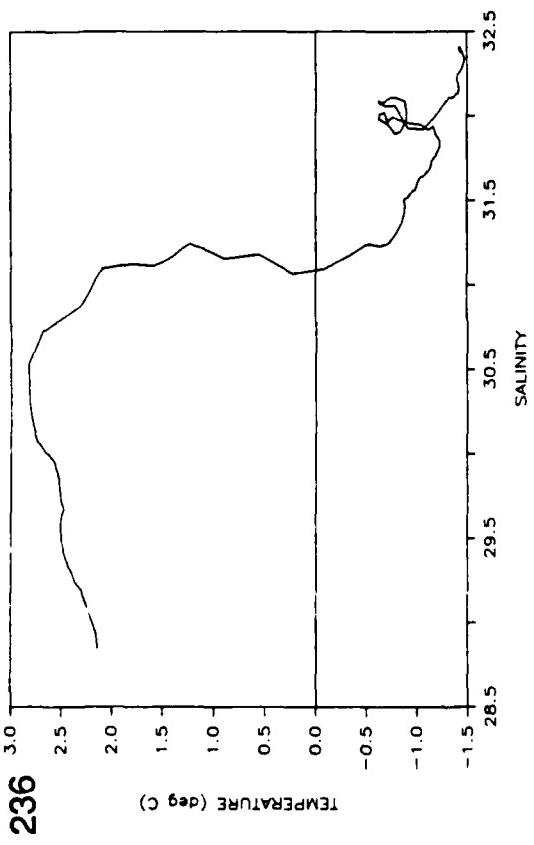
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231							



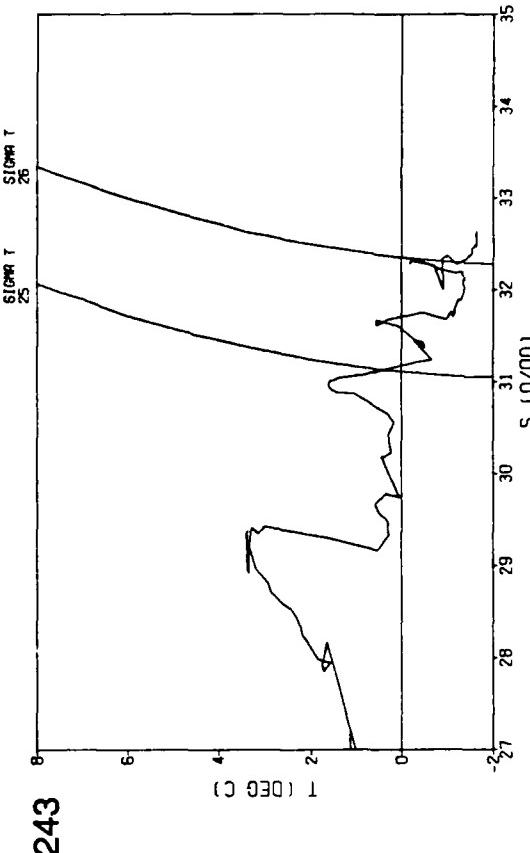
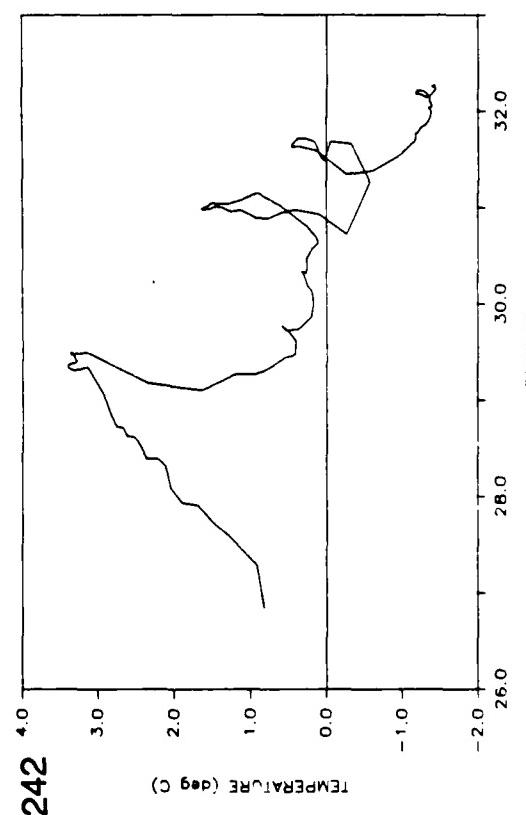
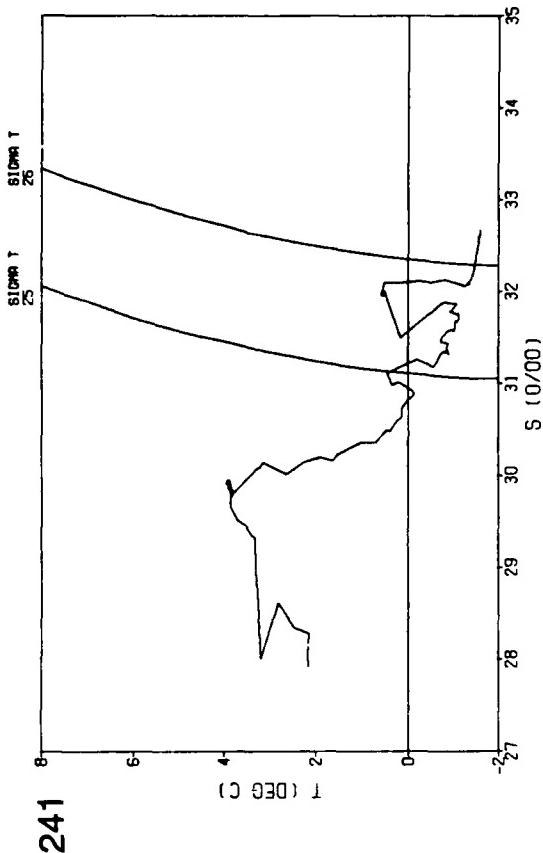
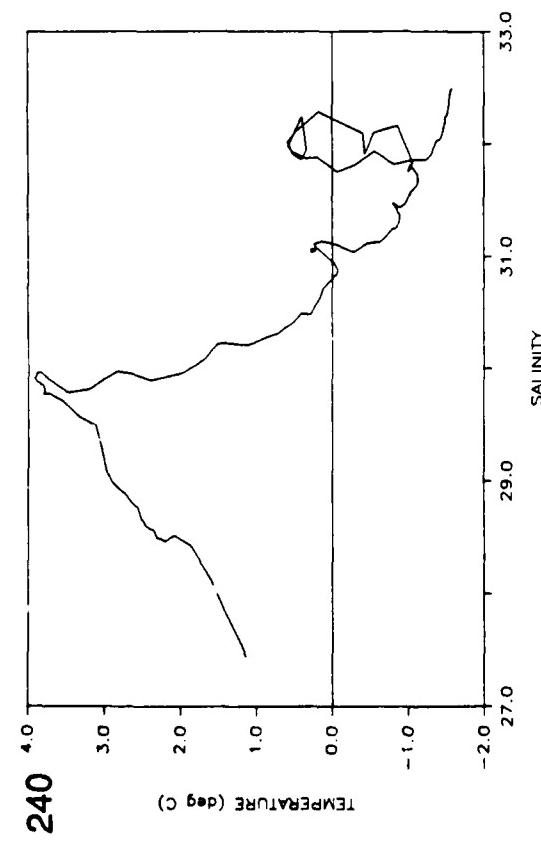
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233	X	X	257	0426	Ship	71 37.1	157 1.7
234	X	X					
235	X	X					



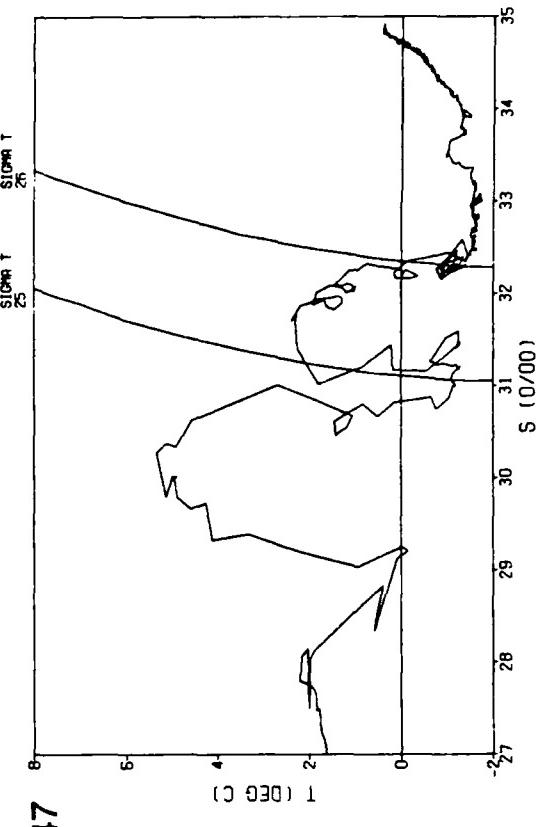
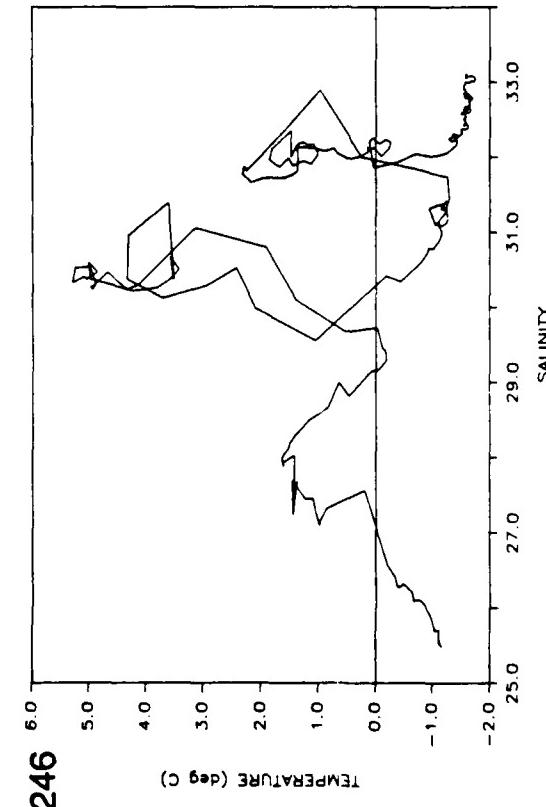
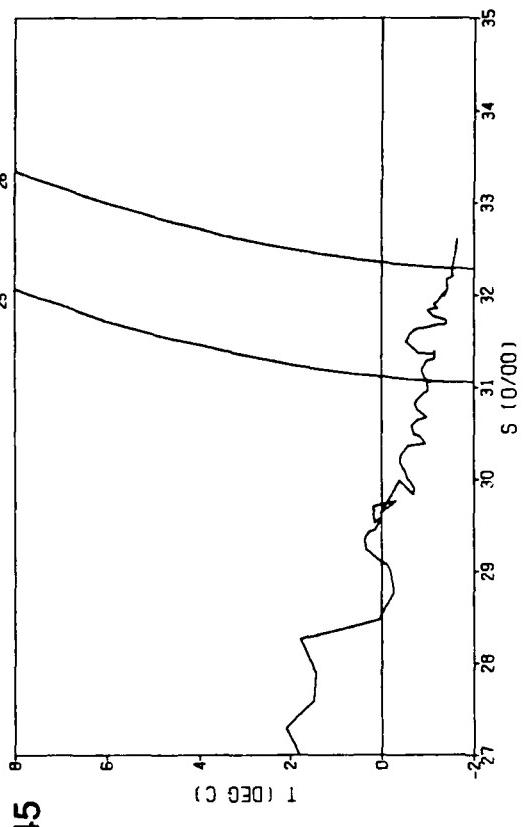
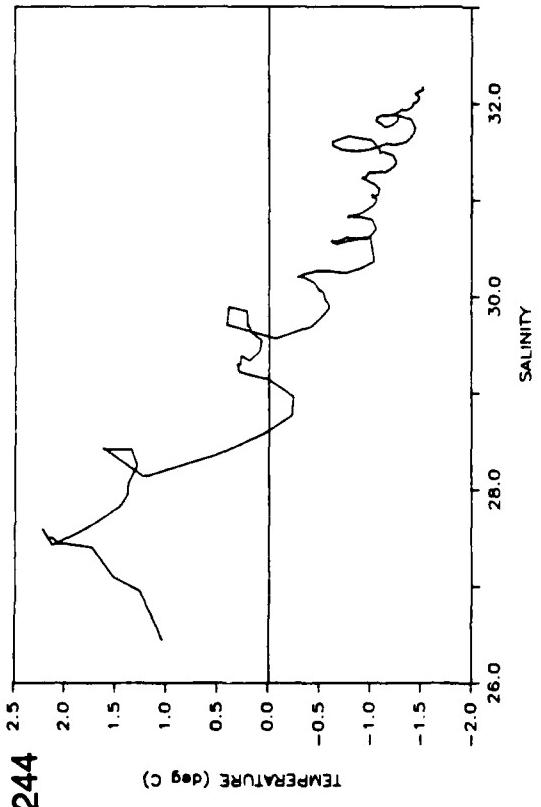
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239							



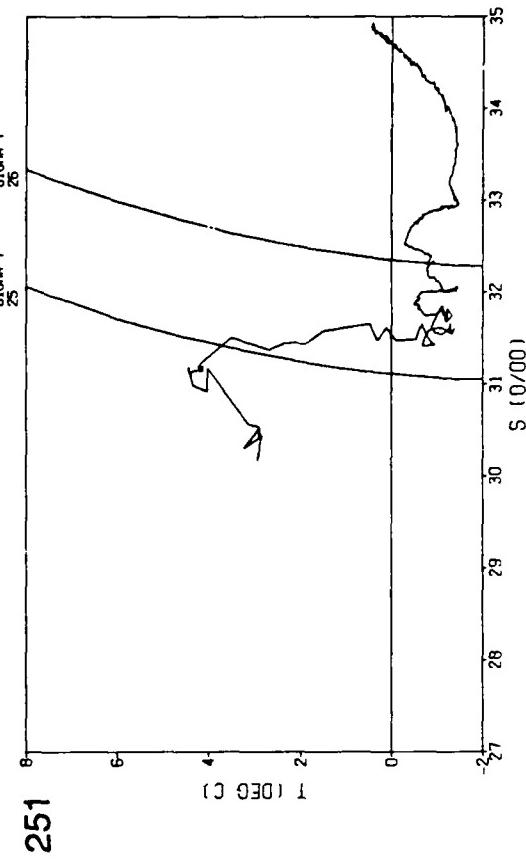
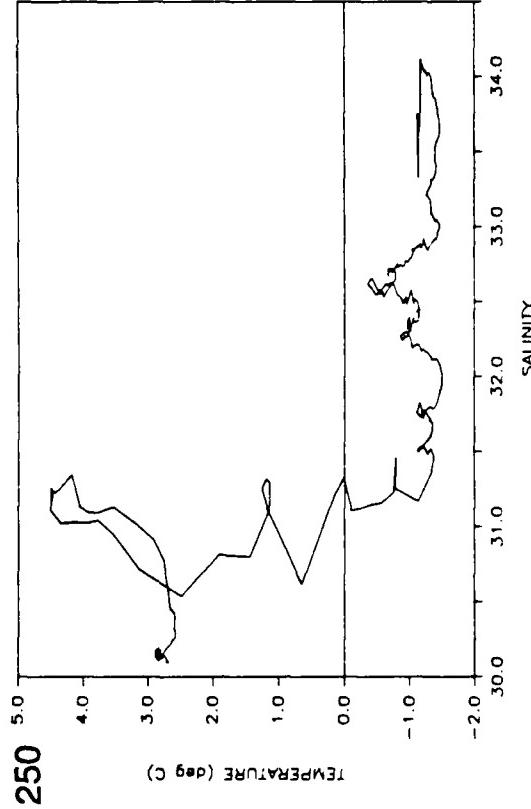
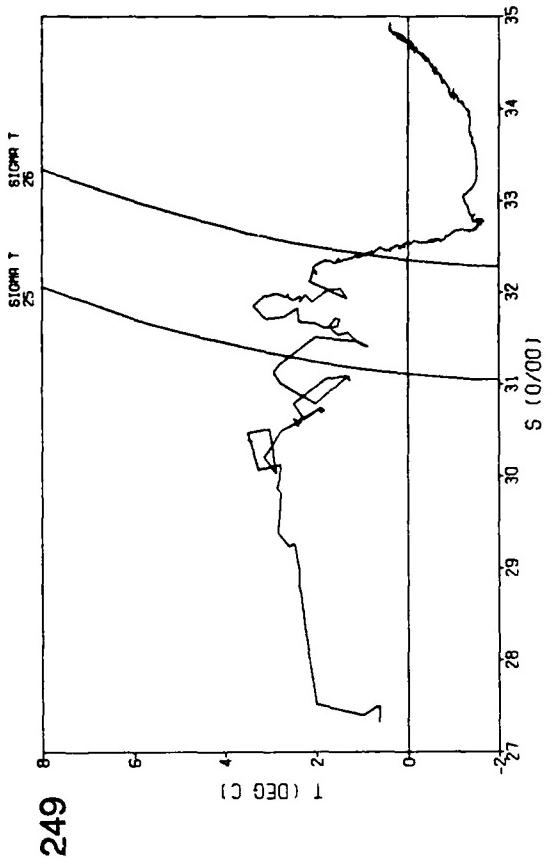
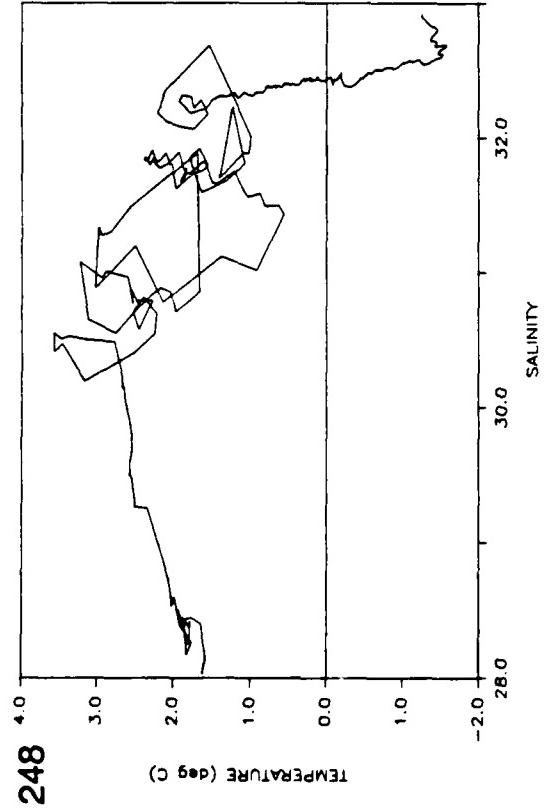
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242							
243	X	X					



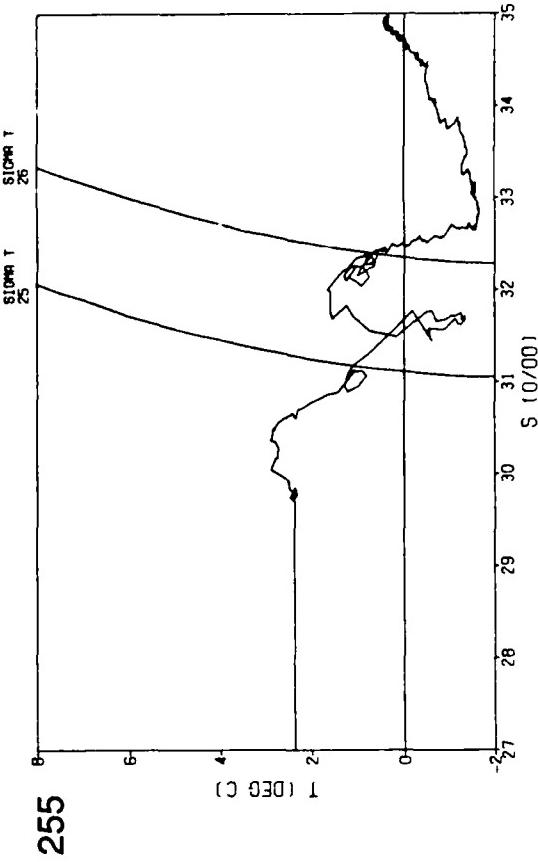
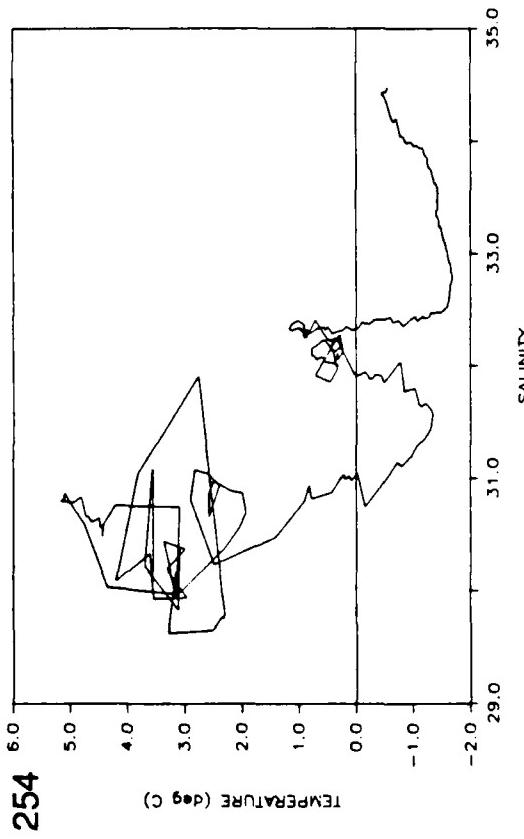
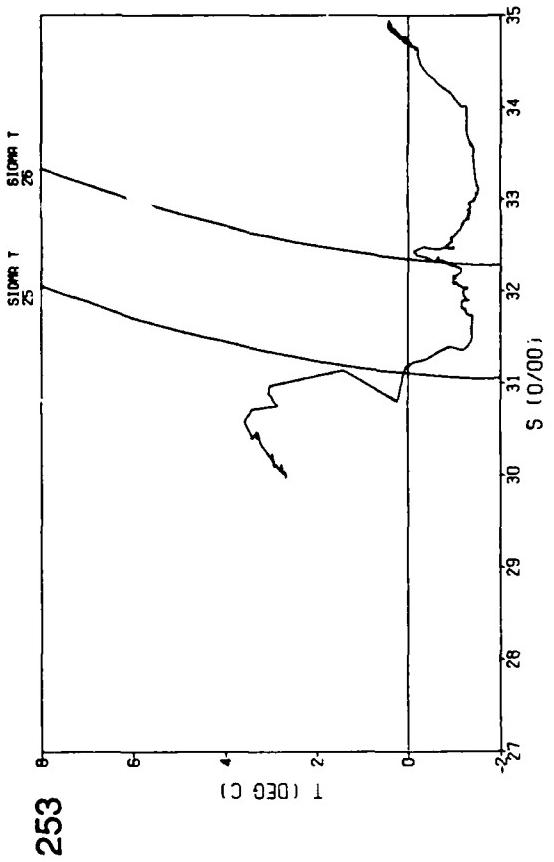
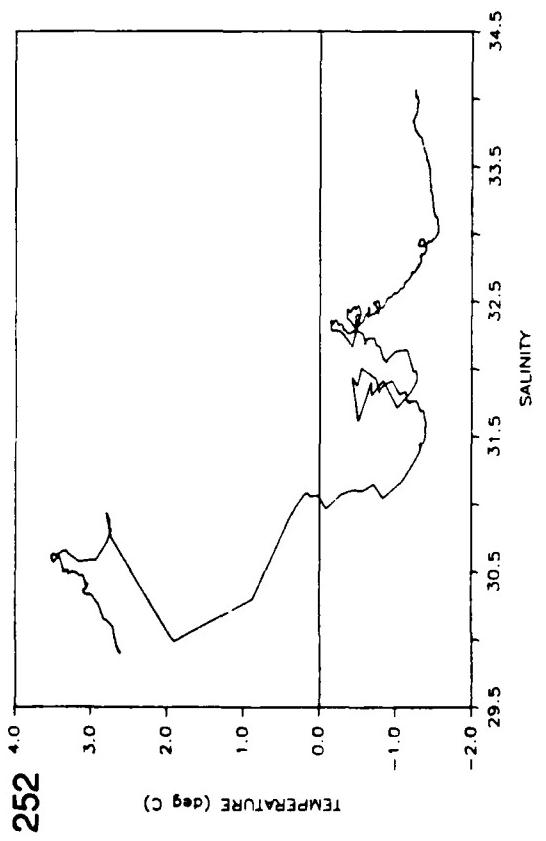
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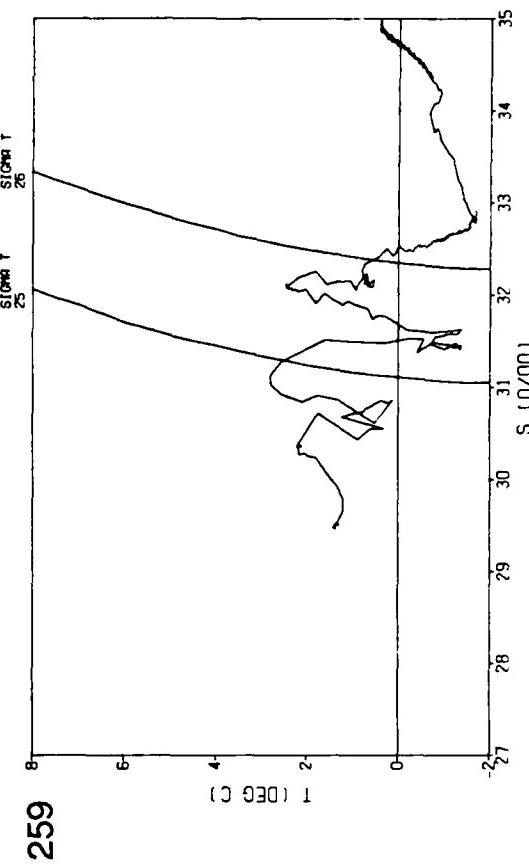
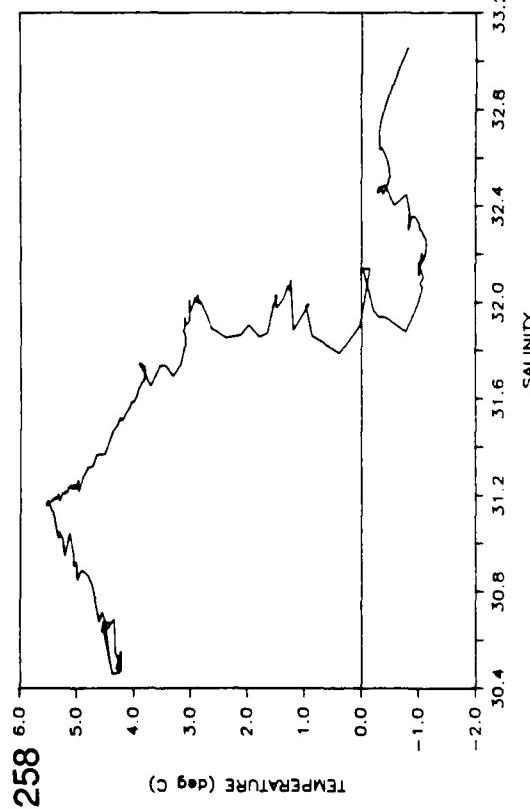
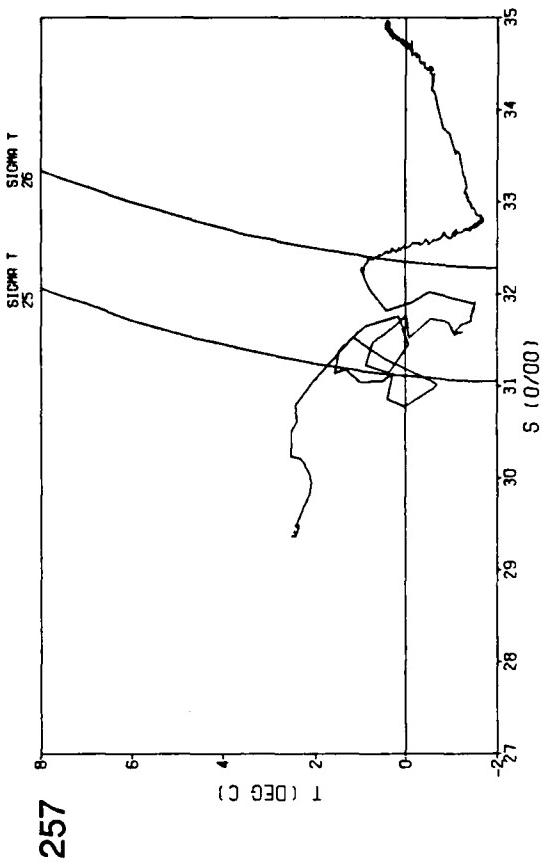
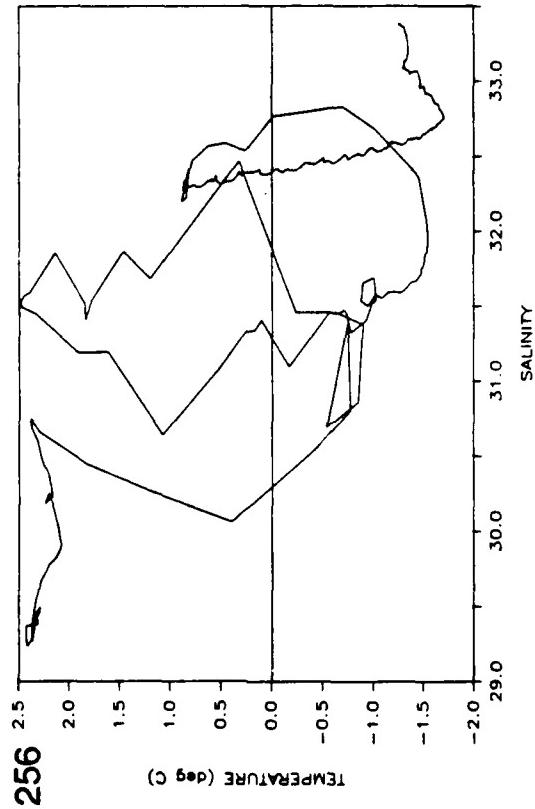
Station Number	ASL Cast	API Cast	Julian Day	GMT hour	Platform	Latitude	Longitude
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249	X	X	257	1802	Ship	71 56.8	155 21.8
250							
251							



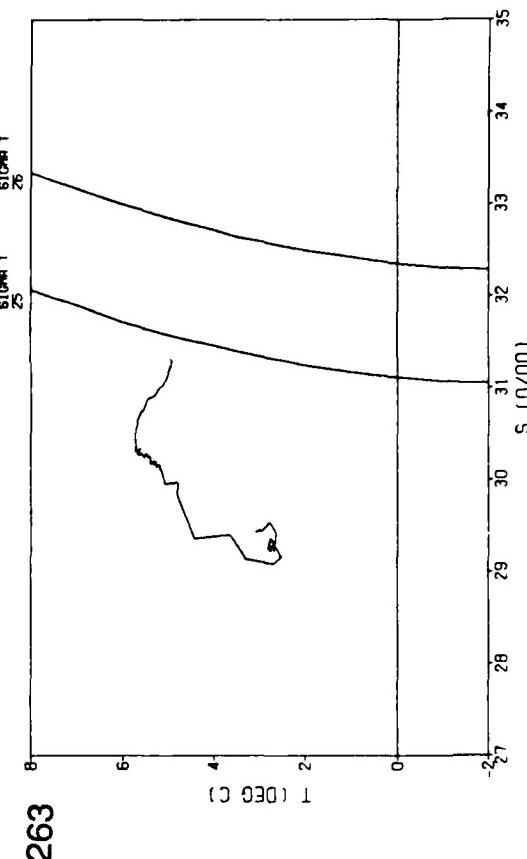
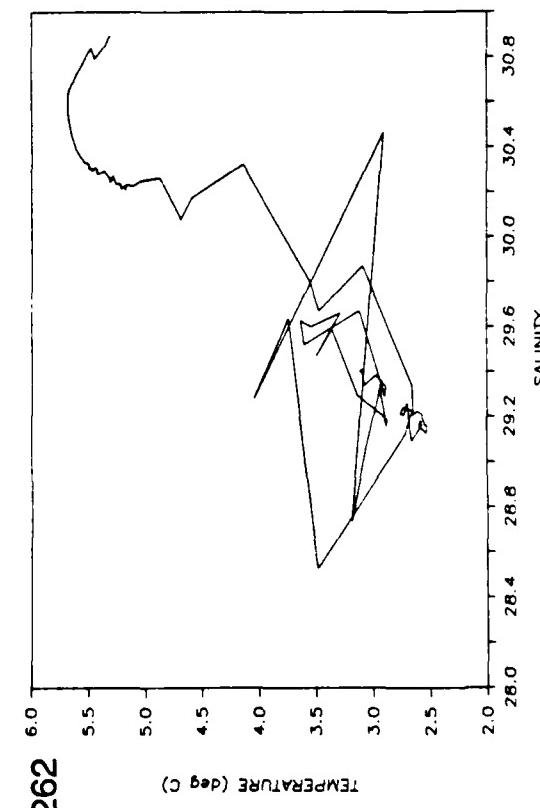
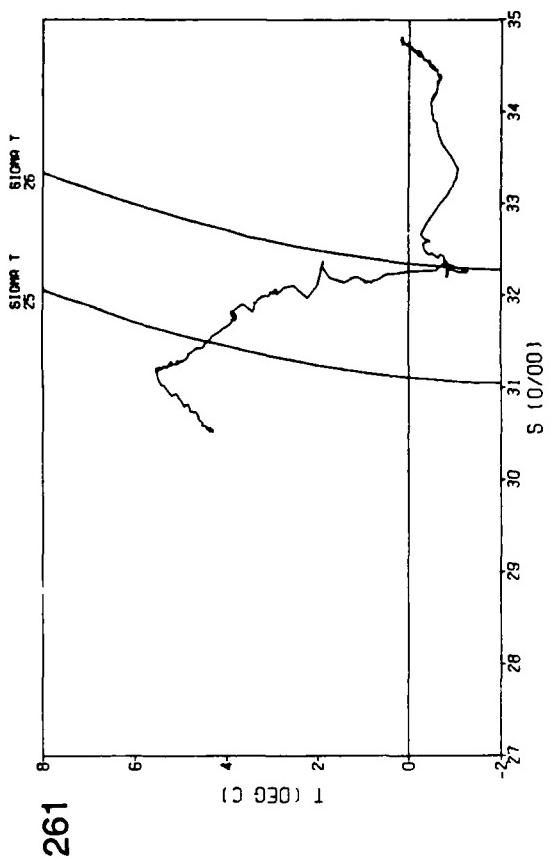
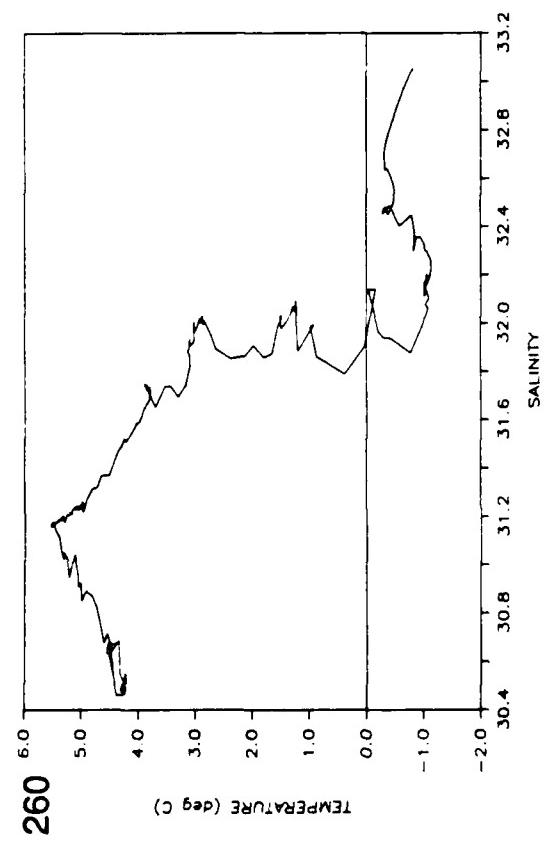
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252	X	X	257	1855	Ship	71 54.0	155 17.7
253	X	X	257	2016	Ship	71 50.2	155 13.3
254	X	X					
255	X	X					



Station Number	ASL Cast	API Cast	Julian Day	GMT hhmm	Platform	Latitude	Longitude
256	X	X	257	2109	Ship	71 48.5	155 11.6
257	X	X	257	2210	Ship	71 45.6	155 8.2
258	X	X					
259	X	X					



Station Number	ASL Cast	APL Cast	Julian Day	GMT h:mm	Platform	Latitude	Longitude
260	X	X	257	2313	Ship	71 42.8	155 4.5
261	X	X	258	0046	Ship	71 33.7	154 49.9
262							
263							



## **APPENDIX C**

### **Surface Conditions in Prior Years**

This appendix contains surface temperature and salinity plots for several earlier cruises.

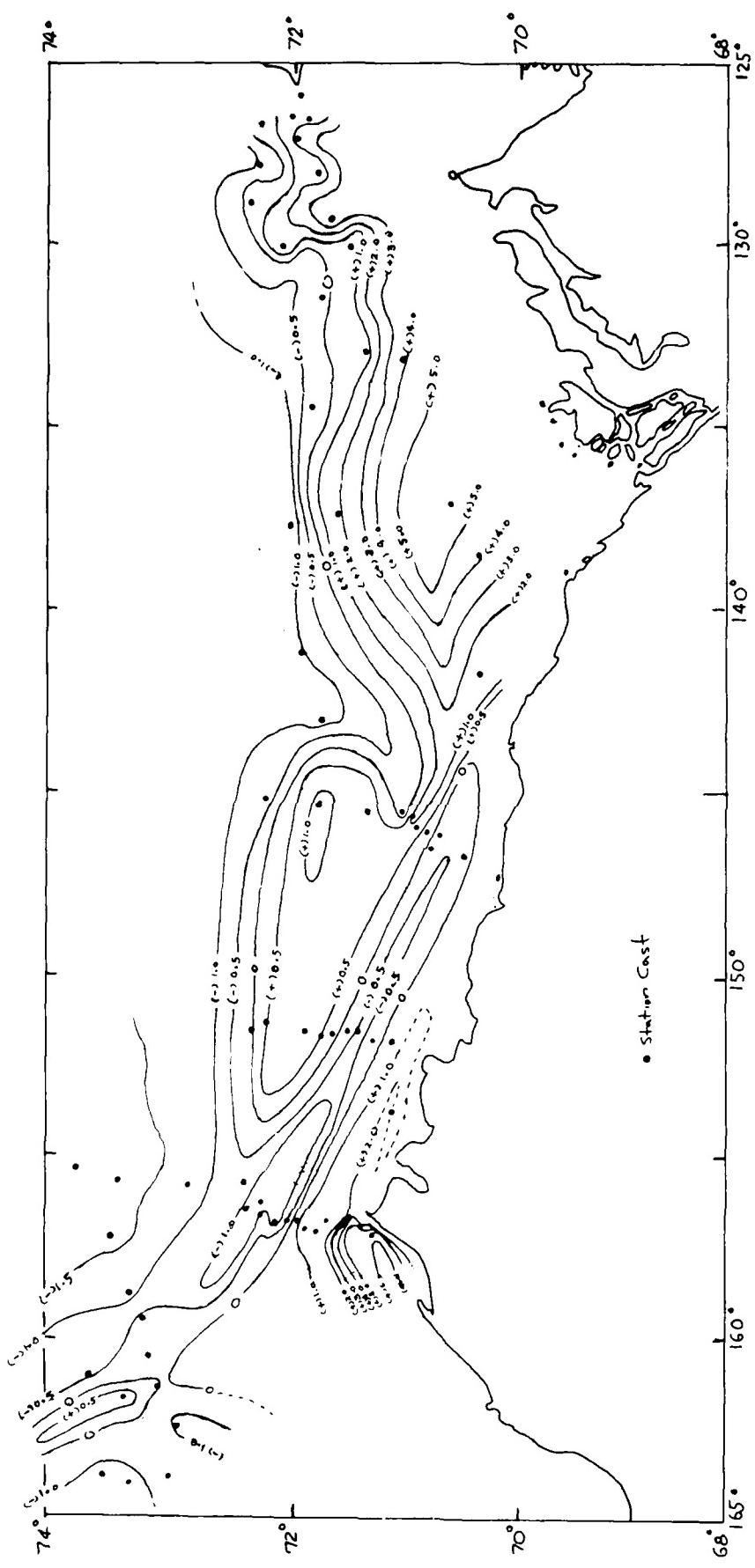


Figure C-1A. Burton Island cruise, July - September 1950, surface temperatures ( $^{\circ}\text{C}$ ).

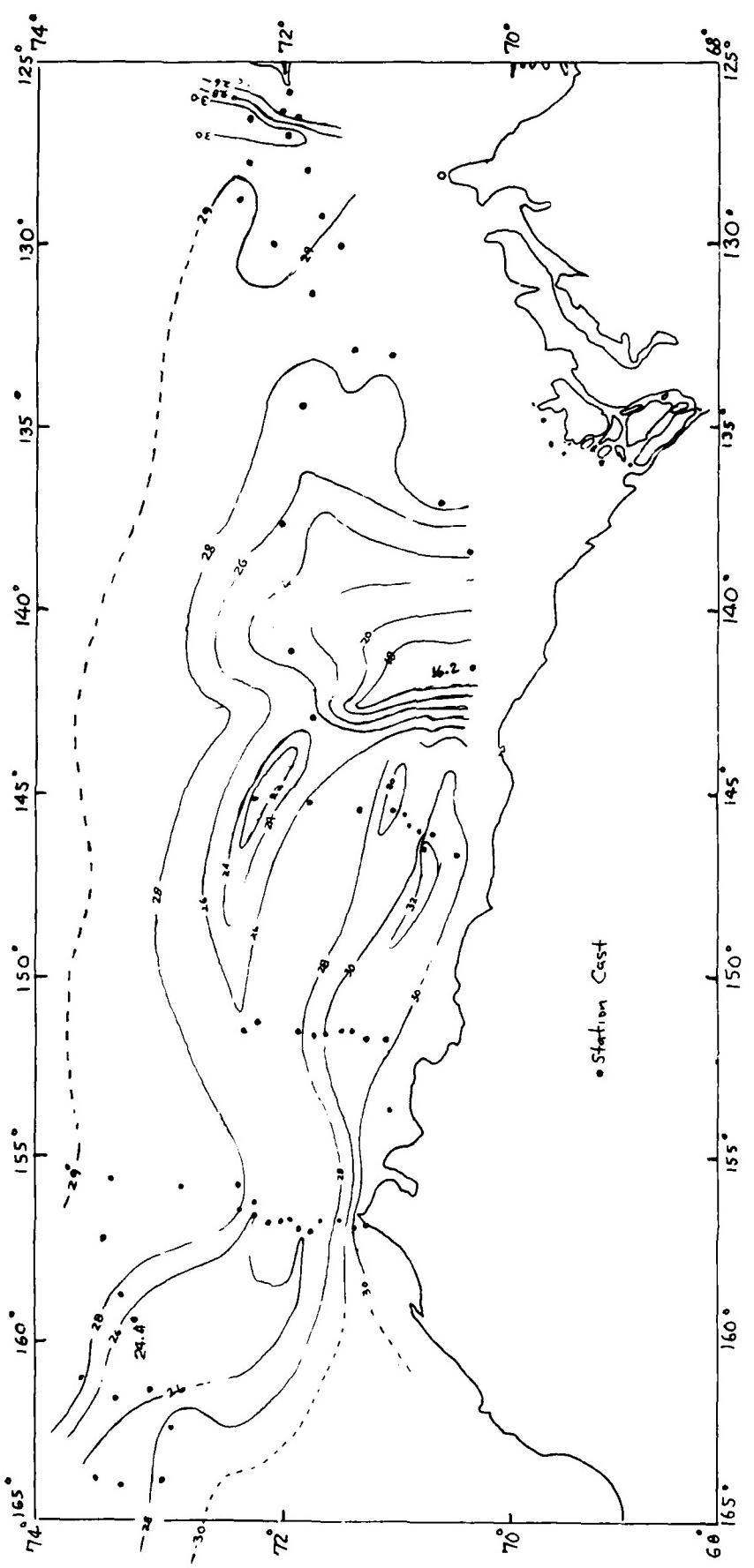
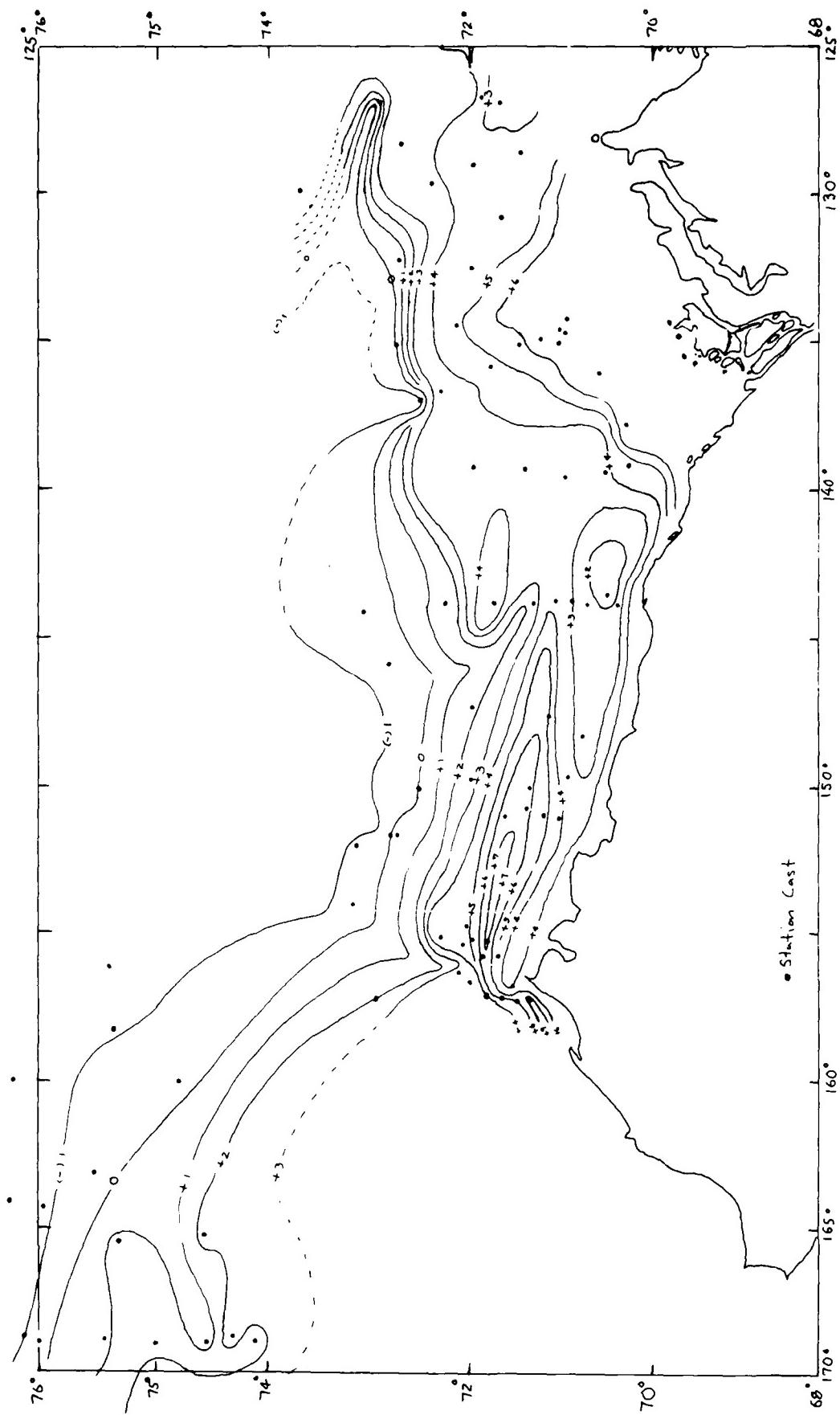


Figure C-1B. Burton Island cruise, July - September 1950, surface salinities ( $\text{\textperthousand}$ ).



*Figure C-2A.* Burton Island cruise, August - September 1951, surface temperatures ( $^{\circ}\text{C}$ ).

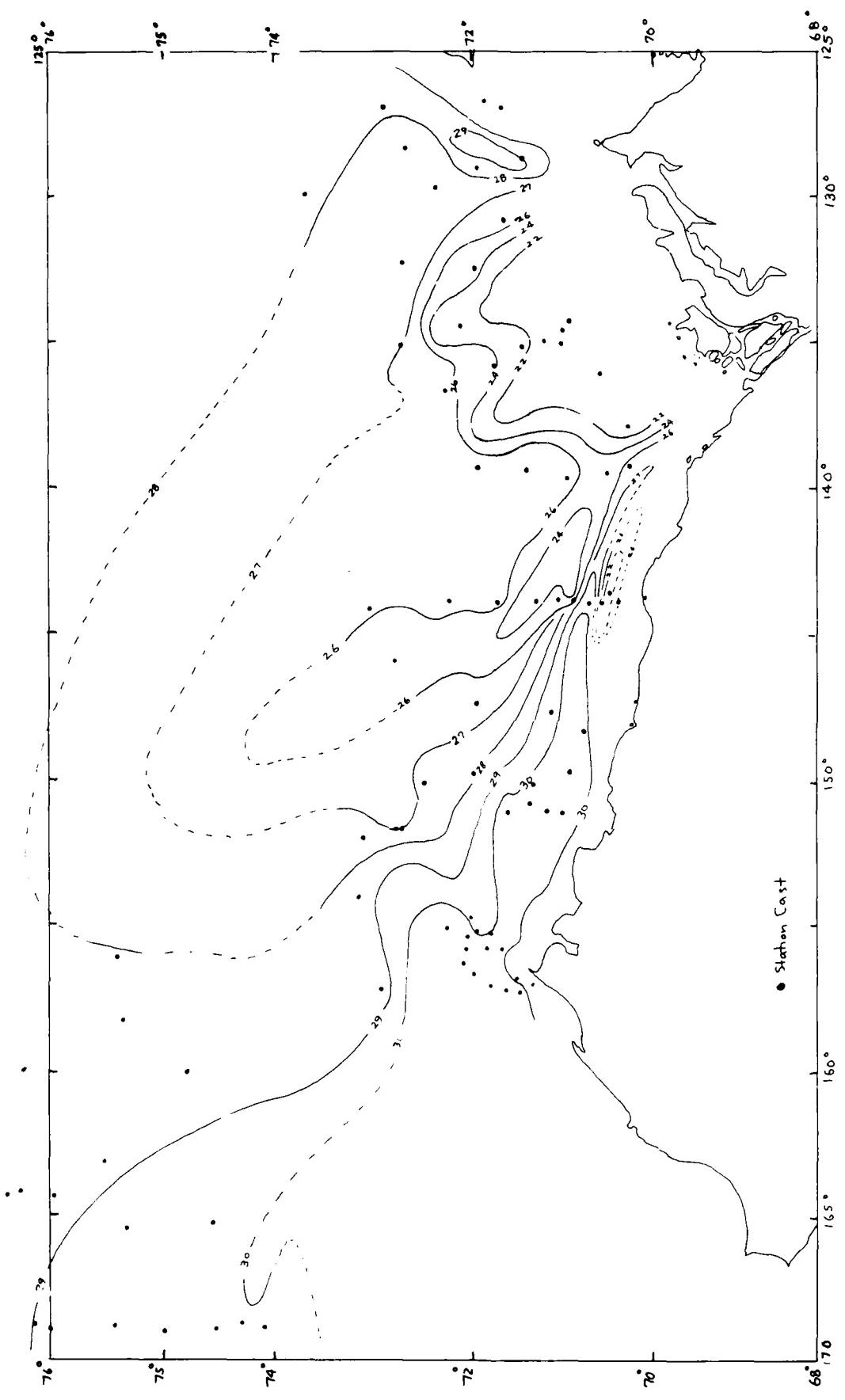


Figure C-2B. Burton Island cruise, August - September 1951, surface salinities ( $\text{\textperthousand}$ ).

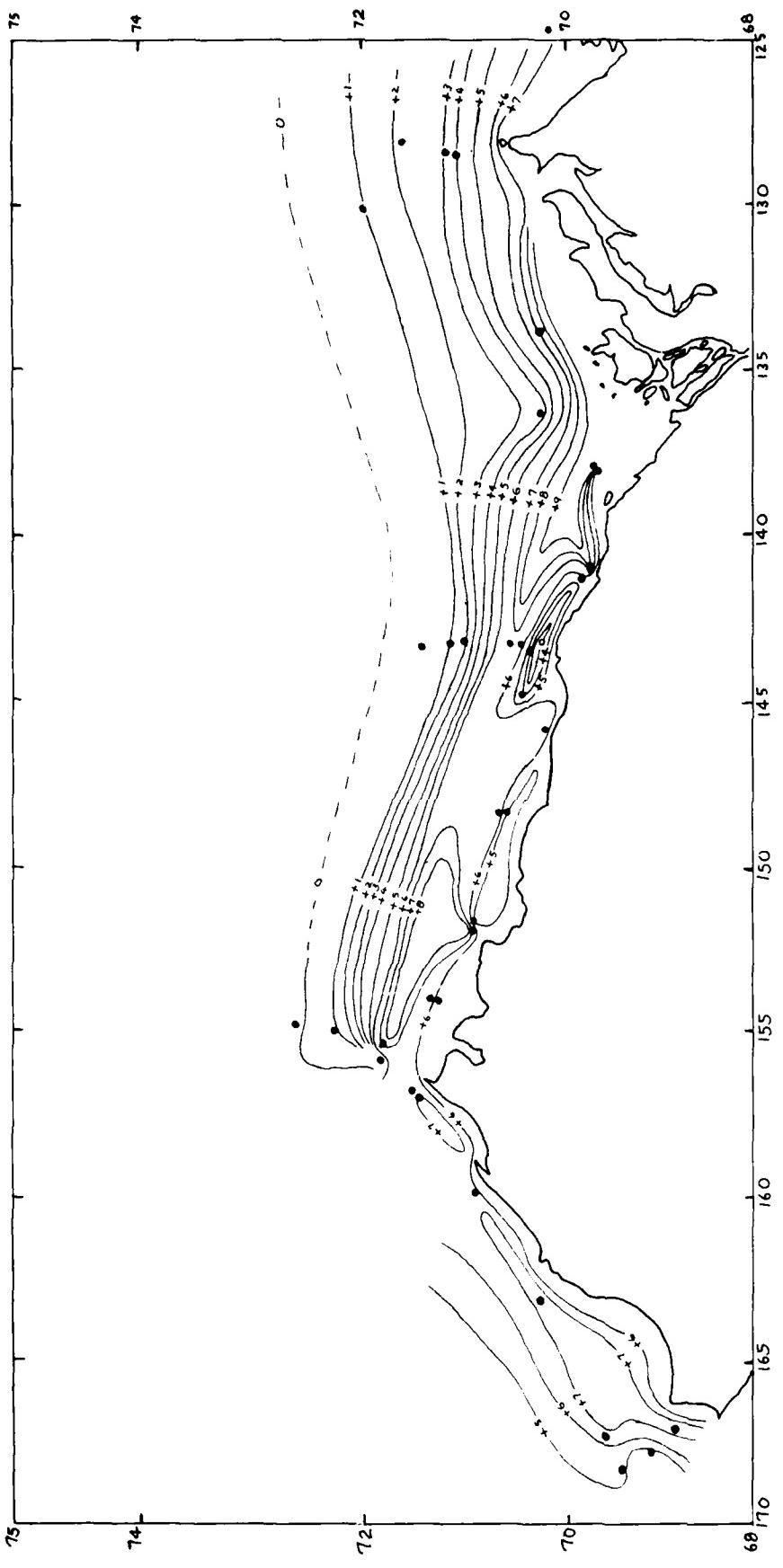


Figure C-3A. Atka cruise August 1957, surface temperatures ( $^{\circ}\text{C}$ ).

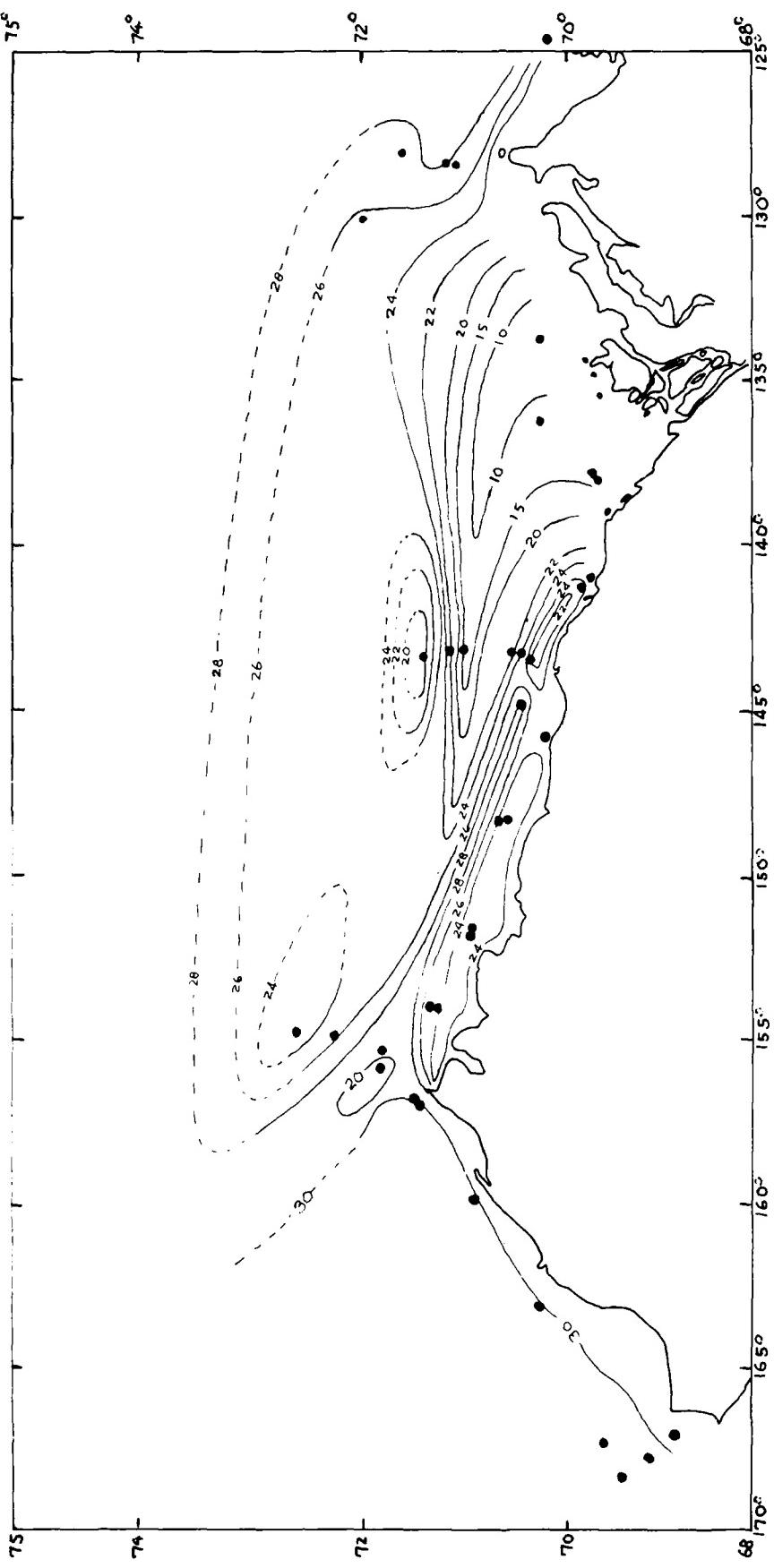


Figure C-3B. Atka cruise 1957, surface salinities (‰).

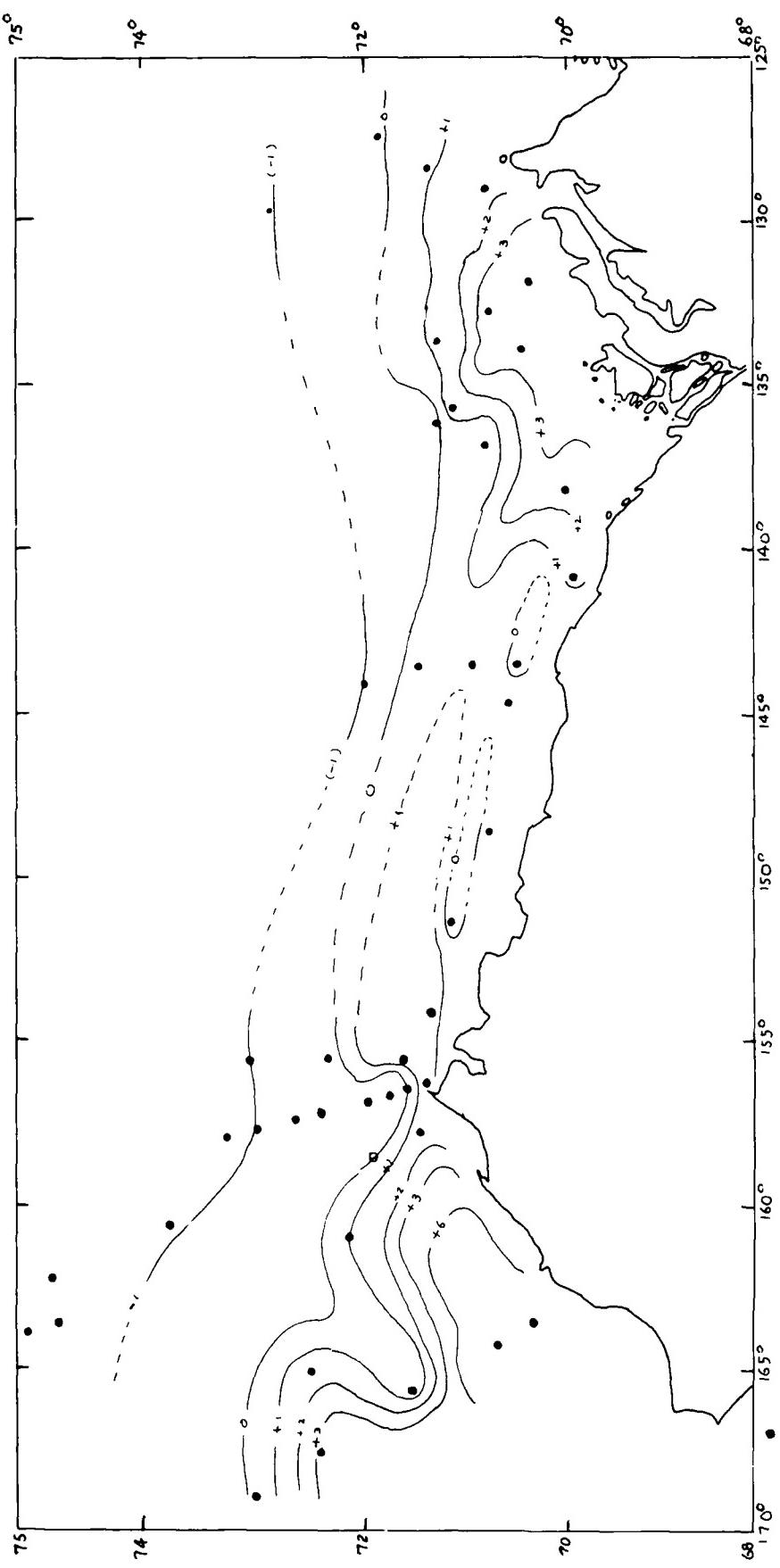


Figure C-4A. Staten Island cruise, August - September 1959, surface temperatures ( $^{\circ}\text{C}$ ).

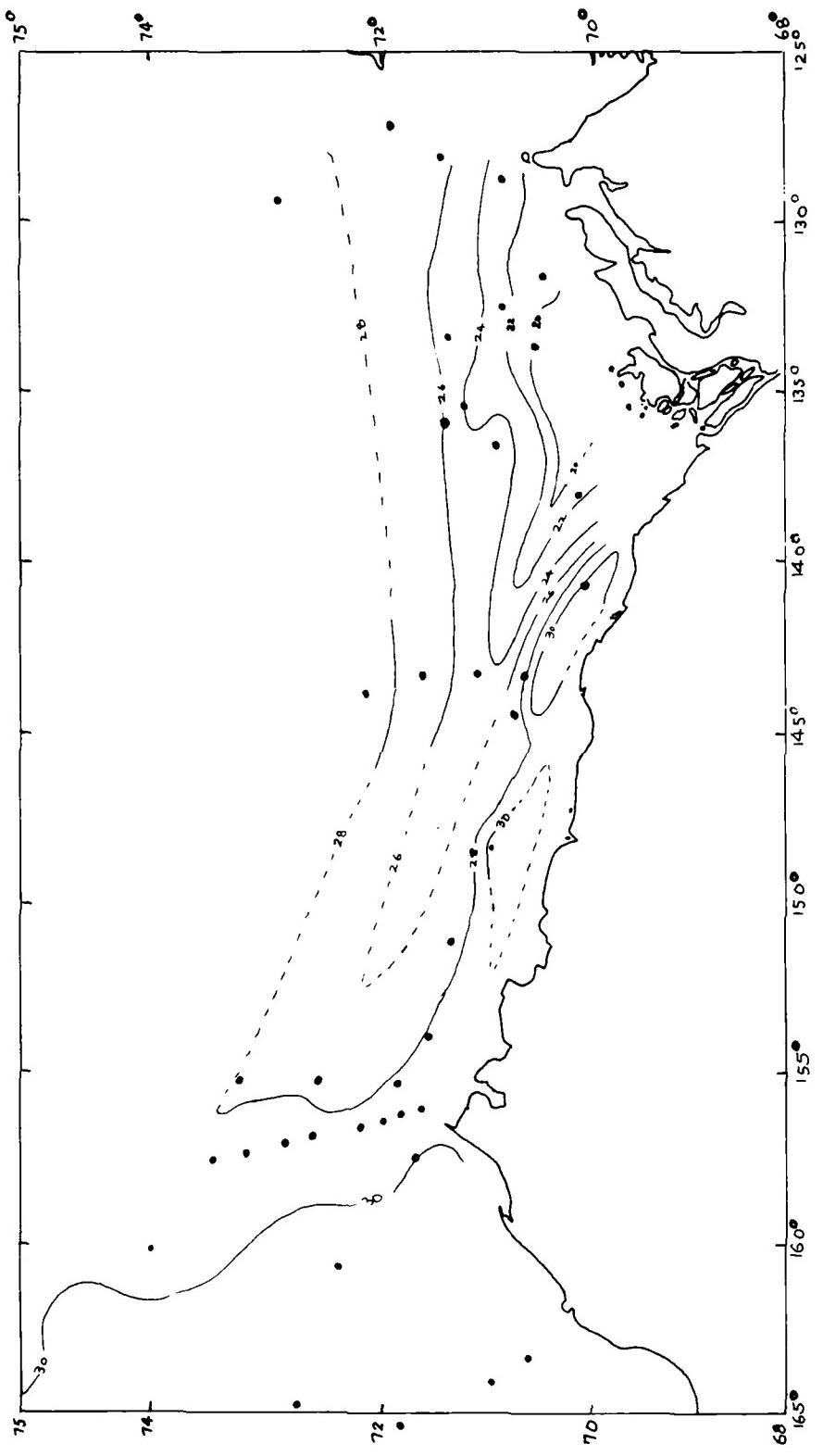


Figure C-4B. Staten Island cruise, August - September 1959, surface salinities ( $\text{\%o}$ ).

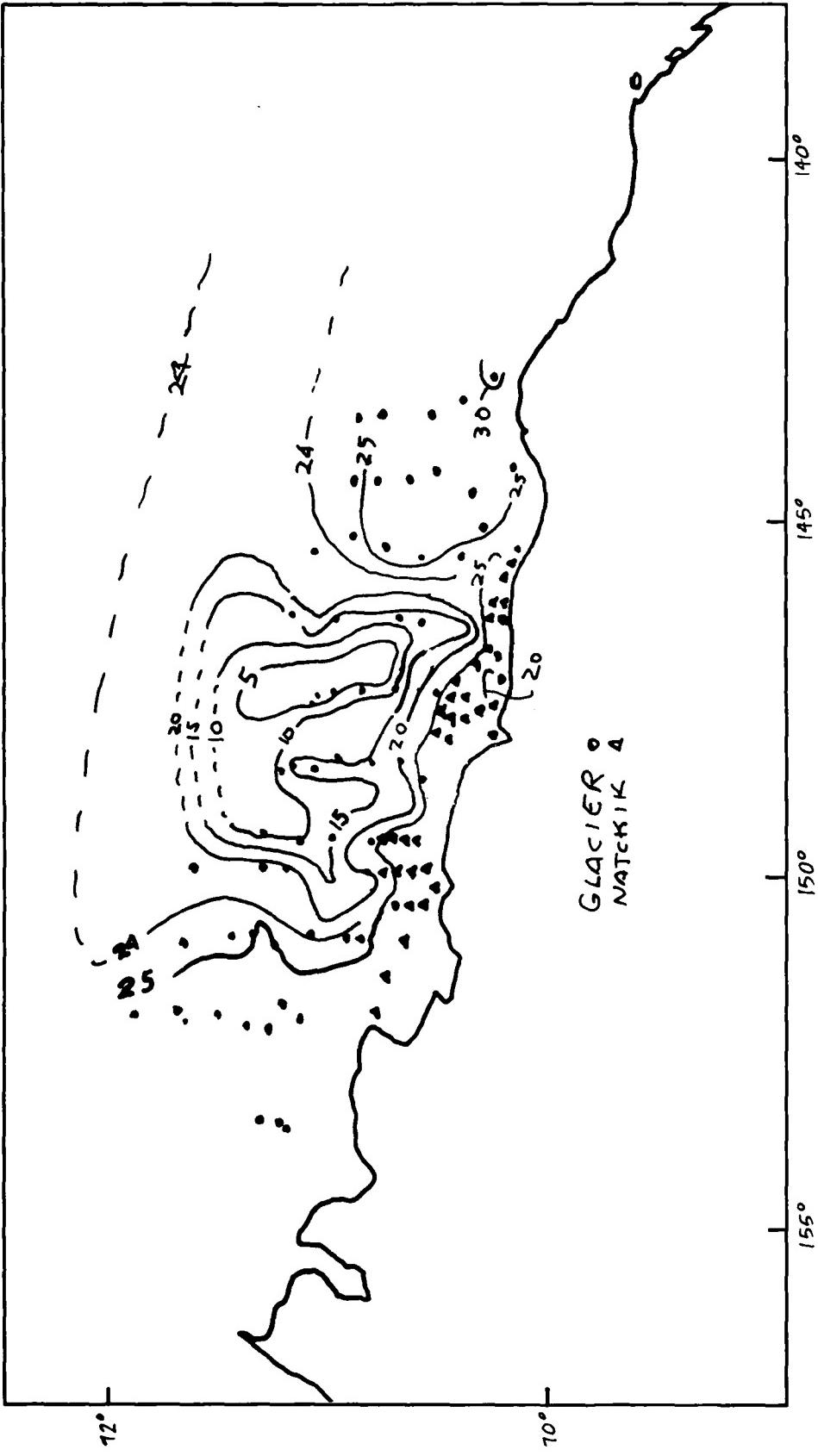


Figure C-5. Glacier and Natchik cruises, August - September 1972, surface salinities (%oo).

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		6. PERFORMING ORG. REPORT NUMBER
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  An oceanographic cruise along the north coast of Alaska and Canada in August and September 1985 reveals evidence of how the Alaskan Coastal Current from the southwest and the Mackenzie River outflow in the eastern portion influence oceanographic conditions in the Beaufort Sea. The coastal current crowds the shore and at depth displaces some of the cold, saline bottom water that drains from the Chukchi Sea through the Barrow Canyon in the spring. The eastward extent of the coastal current (cont.)		

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20., cont.

is about 148°W longitude, and the westward progression of the Mackenzie River water about 141°W longitude. The ice and weather conditions during the survey appeared to influence water exchange.

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